15 meter
IR Dome Internet Camera

ICA-530

User's Manual

Version: 2.00

Date: June. 2008

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance. (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET 15 meter IR Dome Internet Camera
Model: ICA-530 (for F/W v 3.0 or above)
Rev: 2.0 (June, 2008)
Part No. EM-ICA530v2

Table of Content

1. Introduction 5
   - 1.1 Overview 5
   - 1.2 Features 5
   - 1.3 Package Contents 6
2. Basic Setup 7
   - 2.1 System Requirements 7
   - 2.2 Physical Details 8
   - 2.3 Hardware Installation 9
   - 2.4 Initial Utility Installation 10
   - 2.5 IP Wizard 13
   - 2.6 Configure With IP Wizard 15
   - 2.7 UPnP Function 18
     - 2.7.1 Windows XP 18
     - 2.7.2 Windows Vista 22
   - 2.8 Setup ActiveX to use the ICA-530 24
     - 2.8.1 Internet Explorer 6 for Windows XP 24
     - 2.8.2 Internet Explorer 7 for Windows XP 25
     - 2.8.3 Internet Explorer 7 for Windows Vista 26
3. Web-based Management 27
   - 3.1 Introduction 27
   - 3.2 Connecting to ICA-530 27
   - 3.3 Live View 29
   - 3.4 ActiveX Control 32
     - 3.4.1 Digital Zoom 33
     - 3.4.2 Record 33
     - 3.4.3 Snapshot 34
     - 3.4.4 Voice 34
     - 3.4.5 Statistics 35
     - 3.4.6 About 35
   - 3.5 Network 36
     - 3.5.1 Network 36
     - 3.5.2 DDNS server 37
     - 3.5.3 PPPoE 38
     - 3.5.4 Streaming 39
     - 3.5.5 UPnP 40
     - 3.5.6 IP Filter 41
     - 3.5.7 IP Notification 42
   - 3.6 Camera 45
     - 3.6.1 Picture 45
     - 3.6.2 PTZ Setting 46
     - 3.6.3 Preset Setting 47
     - 3.6.4 Tour Setting 47
   - 3.7 System 49
     - 3.7.1 System 49
     - 3.7.2 Date & Time 50
     - 3.7.3 Maintenance 51
   - 3.8 Video 53
     - 3.8.1 Common 53
     - 3.8.2 MPEG4/VGA 54
     - 3.8.3 MPEG4/QVGA 55
     - 3.8.4 MPEG4/QQVGA 56
     - 3.8.5 VIDEO/JPEG 57
   - 3.9 Audio 58
   - 3.10 User 59

3.11 E-Mail 60
3.12 Object Detection 61
3.13 Event Server 62
3.13.1 FTP Server 62
3.13.2 TCP Server 63
3.13.3 HTTP Server 64
3.14 Event Schedule 65
Appendix A: Reset Factory Default Settings 66
Appendix B: PING IP Address 67
Appendix C: Bandwidth and Video Size Estimation 68
Appendix D: DDNS Application 70

1. Introduction

The PLANET ICA-530 is 15 meter IR Dome Internet Camera. The ICA-530 has built-in 24 LEDs that array of infrared illuminators can easily distinguish objects at a distance of 15 meter and beyond. It contains excellent panning feature 360 degrees, tilting feature 180 degree and rotating feature 360 degrees.

The ICA-530 can send video and audio via the internet to a web browser anywhere in the world. The ICA-530 takes surveillance to use 2-way audio. It can remotely talk to anyone at ICA-530 site when adding a speaker on ICA-530.

Multi-profile stands for video stream simultaneously. The ICA-530 can generate MPEG-4 and M-JPEG streaming to different users in the meantime. Moreover, the resolution can differ from one user to another. This state-of-art design is considerable to fit in various network environments. Up to 10 users can have access to the ICA-530 simultaneously at any point in time.

1.1 Overview

This user's manual explains how to operate the 15 meter IR dome internet camera from a computer. Basically, the user's manual is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate the Network Camera.

1.2 Features

- AXIS compatible SDK
- High quality of 1/3" SONY CCD
- Clear and high resolution quality pictures for day and night
- LED used on ICA-530 are 4 times brighter than ordinary IR LED and visible distance up to 15 meter
- 3GPP for 3G mobile remote applications
- Multi-profile encoder supports MPEG-4 and M-JPEG video compression simultaneously and 30fps for all resolution
- Plug-N-Watch is able to simplify system integration in existing network environment
- Because of supporting TCP/IP networking, SMTP e-mail and HTTP public network standards, ICA-530 can be applied and utilized to a mixed IP network environment
- Easy configuration: Network administrators can configure and manage ICA-530 via Windows-based utility or web interface
- DDNS, PPPoE and FTP uploading supports more alternatives in surveillance network
- Motion Detection: the motion detection feature can monitor any suspicious movement in specific area
- 2-way audio supported
- Supports 3-axis camera cradle

- Night & Day switch with IR-cut filter, ICA-530 can get better video quality even in the nighttime.

1.3 Package Contents

User can find the following items in the package for ICA-530:

ICA-530 x 1

Power Adapter x 1

Wrench x 1

Telephone box x 1

CD Disk x 1

Quick Installation Guide x 2

Software CD x 1

NOTE :

1. If any of the above items are missing, please contact your dealer immediately.
2. Using the power supply that is not the one included in ICA-530 packet will cause damage and void the warranty for this product.

2. Basic Setup

This chapter provides details of installing and configuring the ICA-530

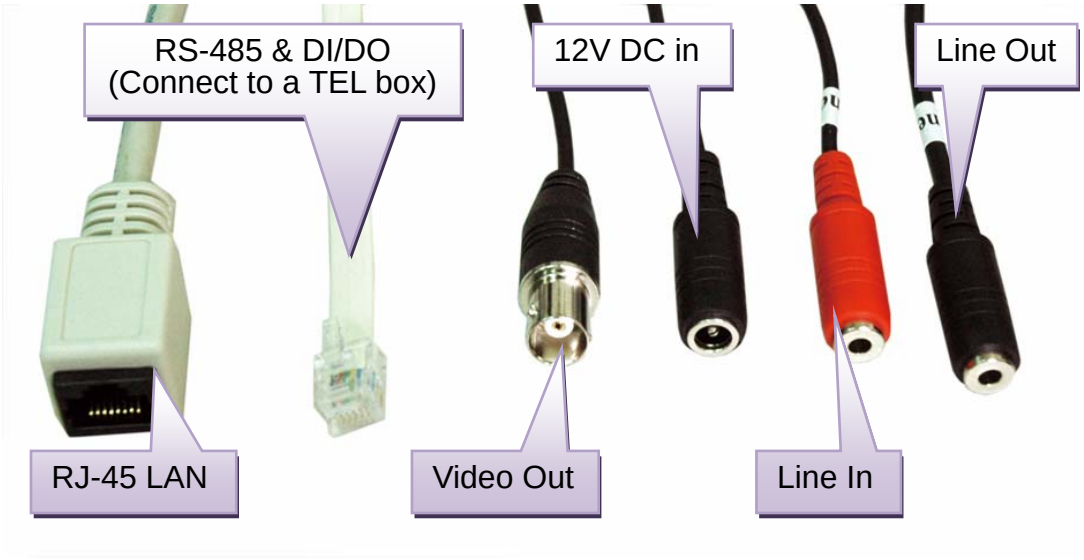
2.1 System Requirements

Network Interface	10/100MBase-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
Basic System Hardware	· CPU: Pentium 4, 3.0GHz or above · Memory Size : 512 MB (512 MB or above Recommended) · VGA card resolution : 1024 x 768 or above · VGA card memory : 64 MB or above · Sound card: Necessary **· Network bandwidth: In VGA resolution mode, minimum upload bandwidth is 1Mbps.**

NOTE: The listed information is minimum system requirements only. Actual requirement will vary depending on the nature of your environment.

2.2 Physical Details

Identification of ICA-530 cables



1. RJ45 LAN socket:

Connect to PC or Hub/Switch. For connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 “straight through” cable to connect the ICA-530 to a 100Mbps Fast Ethernet network switch or hub.

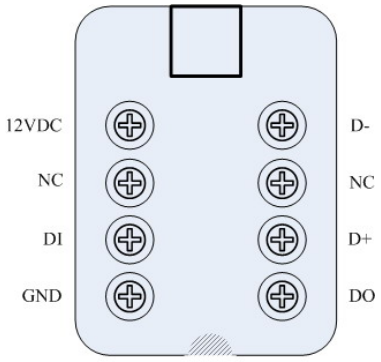
Note that, in case you need to connect the device to PC or notebook directly, you should use cross over cable instead.

2. RS-485 & DI/DO:

Connect to a local keyboard controller and connect to sensor in and alarm out devices

Inside the TEL box:

Name	Function
12VDC	DC 12V (50mA maximum)
GND	GND
D+	RS485 data +
D-	RS485 data -
DI	Digital signal input
DO	Digital signal output



NOTE: The RS-485 of ICA-530 is master that can control external scanner.

3. Local Video output (BNC port)

The Network Camera also provides composite video output. User can use BNC video cable to connect the Network Camera with a TV monitor or VCR.

4. DC-in Jack

The input power is 12VDC. Note that supply the power to the Network Camera with standard power adapter included in package. Otherwise, the improper power adapter may damage the unit and result in danger.

5. Line in (audio in)

Connect an audio input source to the ICA-530.

6. Line out (audio out)

Connect a loud speaker to the ICA-530. This function is for voice alerting and two-way audio.

2.3 Hardware Installation

1. Drill 20mm (3/4") holes in the ceiling or wall and then align the mounting plate to the holes you have made as below.

Ceiling Top Plate	Directly install on any horizontal or vertical surface

2. Camera Adjustment:

Tilting View	Rotating View	Panning View
Angle range is 0^{o}~180^{o}	Angle range is 0^{o}~360^{o}	Angle range is 0^{o}~360^{o}

3. Connect the necessary cables and connectors, for examples, Ethernet cable and power jack.

4. Done.

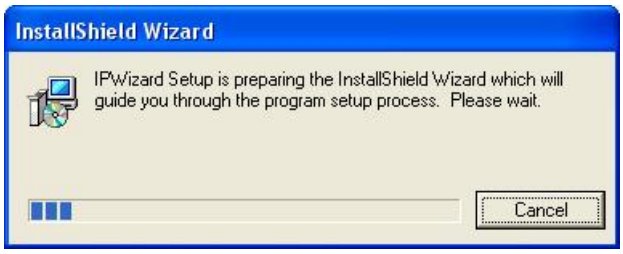
2.4 Initial Utility Installation

This chapter shows how to quick set up your ICA-530. The ICA-530 is with the default settings. However to help you find the networked camera quickly the windows utility-IP Wizard can search the cameras in the network that shall help you to configure some basic setting before you started advanced management and monitoring.

1. Insert the bundled CD into the CD-ROM drive to launch the autorun program. Once completed, a welcome menu screen will appear.

2. Click the “IP Wizard” hyperlink; you will see the InstallShield Wizard dialog box as below.

   NOTE: If the welcome screen does not appear, click “Start” at the taskbar. Then, select “Run” and type “D:\Utility\setup.exe”, assume D is your CD-ROM drive.

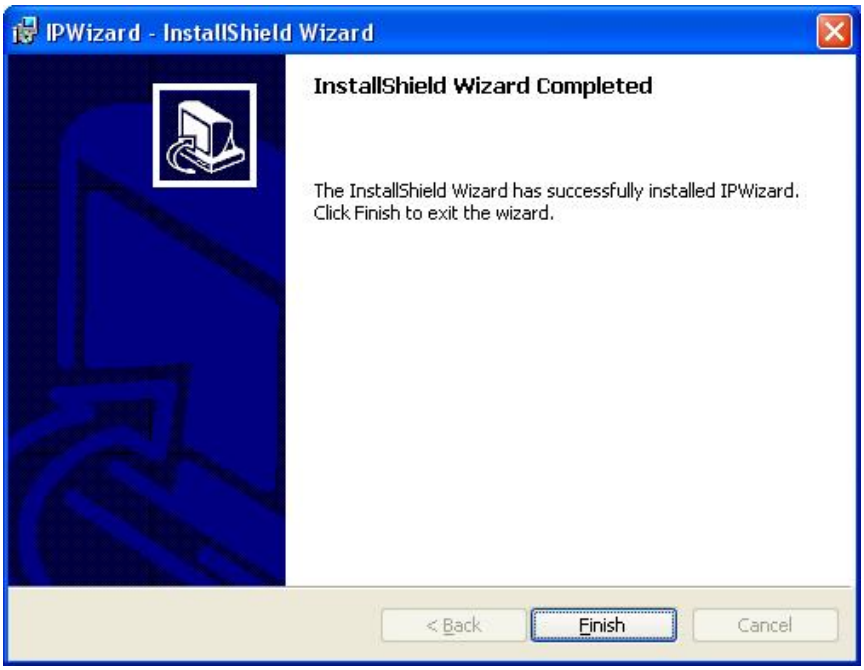


3. The “Welcome to the InstallShield Wizard for IP Wizard” will display on the screen and click “Next” to continue.

4. Please click “Next” to install with original settings, or you may click “Change…” button to modify the install folder then press “Next” to continue.

5. Please click “Install” to start the installation.

6. Please click “Finish” to complete the installation



7. Please double-click the utility icon

on the desktop then you will see the ICA-530 utility.

2.5 IP Wizard

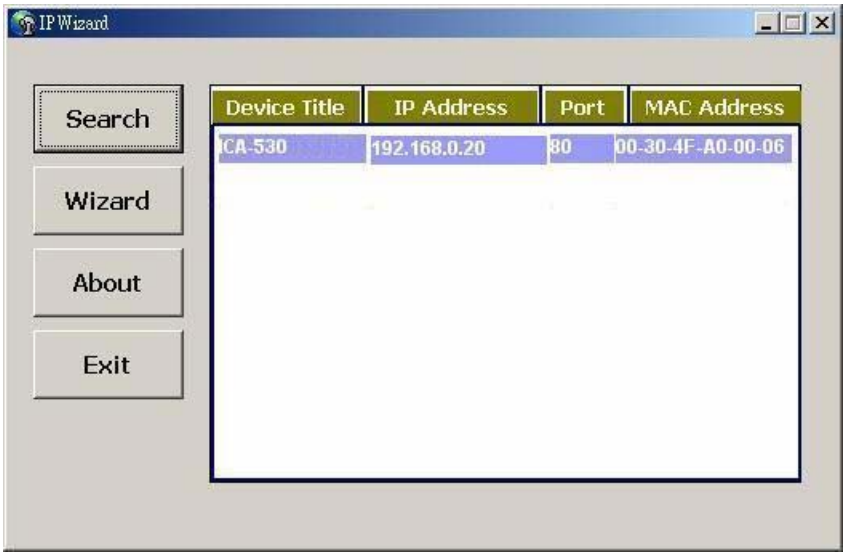
When you installed the ICA-530 on a LAN environment, you may execute IP Wizard to discover ICA-530's IP address and set up related parameters in the ICA-530.

Search Button:

When click **Search** button, a searching window will pop up. IP Wizard is starting to search ICA-530 on the LAN. The message "No Network Devices Is Found" will appear on this window if IP Wizard cannot find any camera on the LAN. Otherwise, existed cameras will be listed. If total quantity is over, please move the cursor to Information Box. Click on the left button of the mouse and the Information Box of the Listing Window will roll upward automatically; on the contrary, move the cursor to the Information Box on the top of Listing Window and click on the left button of the mouse and Listing Window will roll downward.

Wizard Button:

When IP Wizard finds your camera, **Wizard** button will become available. Please select the device you would like to configure in the Information Box. The device will turn into yellow which means this device is selected; please press "**Wizard**" button. Or you could double click the mouse left key on the selected camera. Relative settings will be carried out. Details of Install Wizard will be specified as Section 2.6.



About Button:

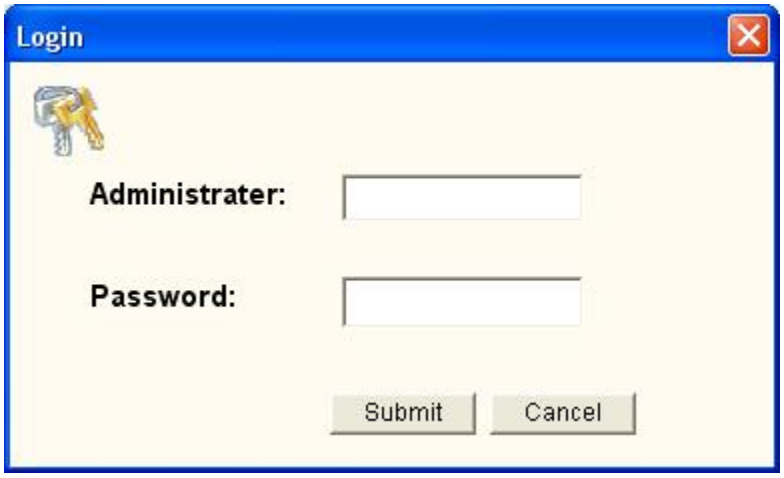
When click "About" button, you will see the version information of IP Wizard shown in the pop-up dialog box.

Exit Button:

Click "**Exit**" button will close the IP Wizard Program.

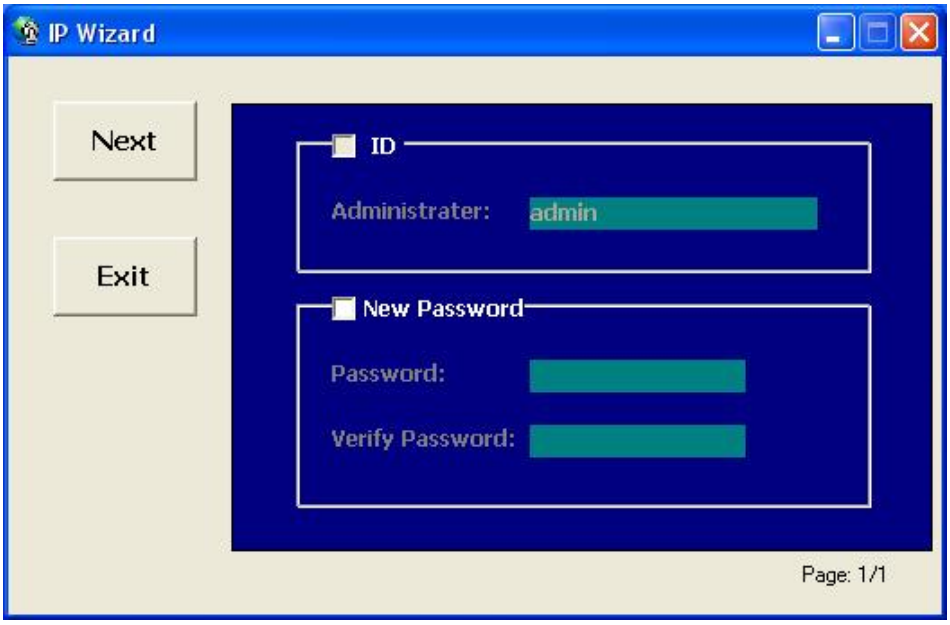
2.6 Configure With IP Wizard

After pressing Installation Wizard, please key in Username and Password of the device when login dialog box appears on the screen. You can login the setup page if authorized name and password is correct. Default **username/password** for machine login: **admin**/<no password>



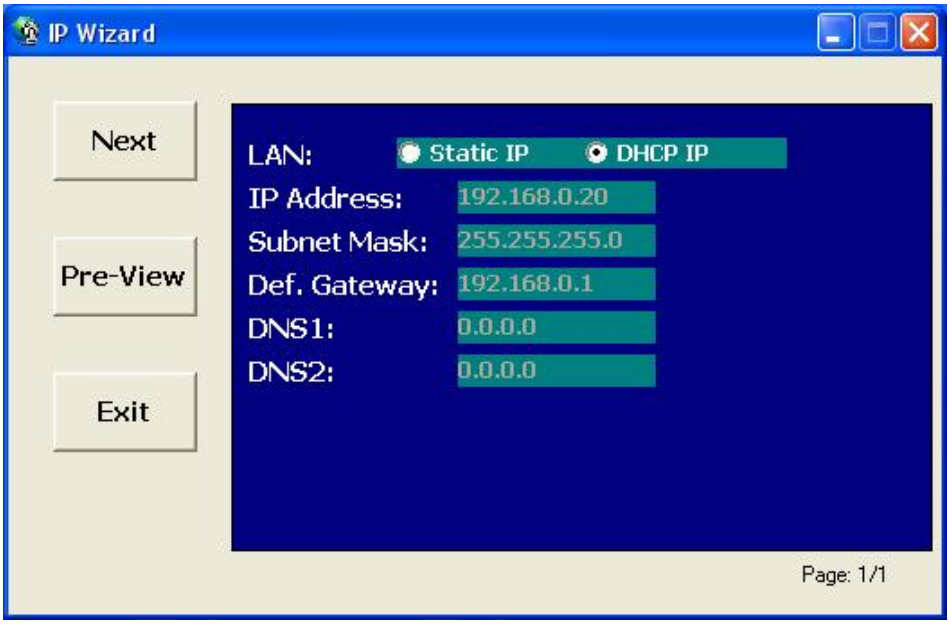
Wizard Page 1: Username and Password

This page is about the change of the authorized user name and password of the selected device. If you don't want to change them, please click "Next" to move to the next page. Press "Exit" button if you don't want to set up right now. If you want to change authorized name or password, you have to check the box in front of **ID** or **New Password**. Authorized Username should contain at least 5~20 characters and New Password should contain at least 4~8 characters.



Wizard Page 2: LAN Setting

This page is about the select of Static IP or DHCP ON.



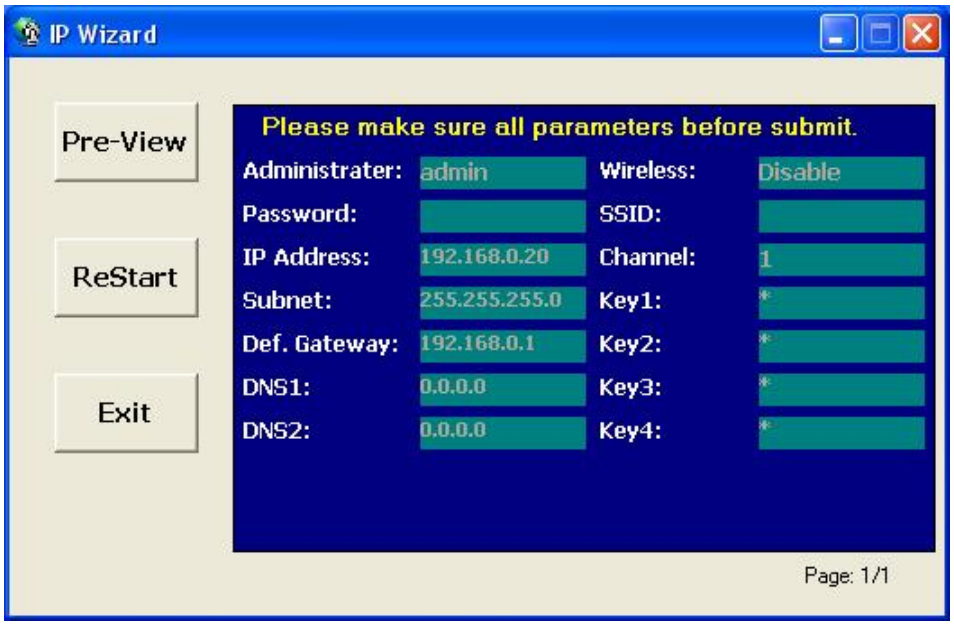
LAN	You can configure this ICA-530 to obtain its address automatically or manually assign. If there is a DHCP server in your network environment and you select "**DHCP ON**", ICA-530 can automatically obtain an IP address. If you don't have DHCP server or you want to use fixed IP address, please select "**Static IP**" and fill in the following fields with proper parameters.
IP Address	IP address is a unique number for identifies this device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200
Subnet Mask	Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.
Def. Gateway	A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.
DNS1	When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.
DNS2	The same function as DNS1. It is optional, not necessary

Note: If no IP address is assigned after 30 seconds, the ICA-530 will work with its default IP

address **192.168.0.20**. User may now open your web browser, and key in http://192.168.0.20 in the address bar of your web browser to logon ICA-530's web configuration page.

Wizard Page 3: Confirmation

This page shows the new configurations. If it is correct, please press "Submit" icon and the setting information will be save to your ICA-530. Click on "Exit" to close this window.



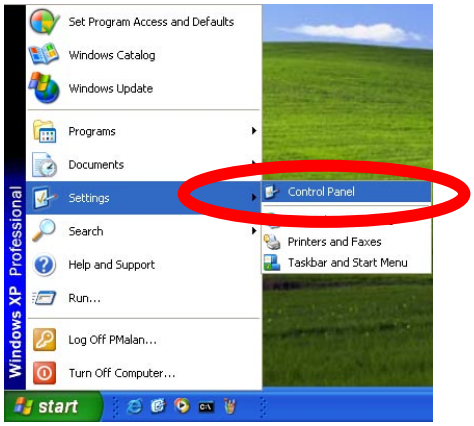
2.7 UPnP Function

NOTE: Windows 2000 does not support UPnP feature.

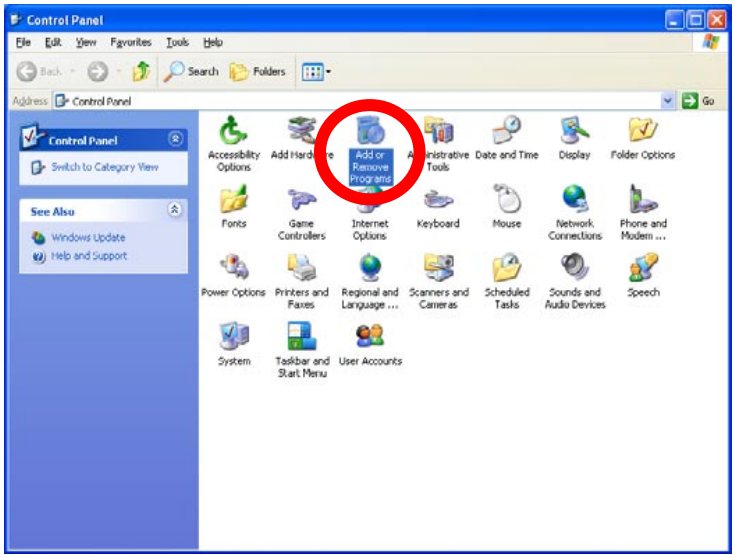
2.7.1 Windows XP

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

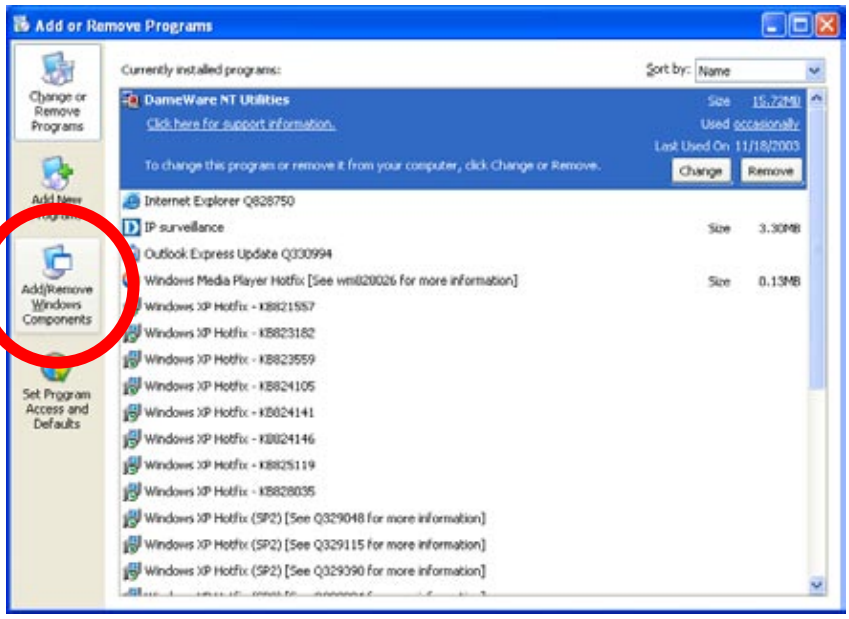
Go to **Start > Settings**, and Click **Control Panel**



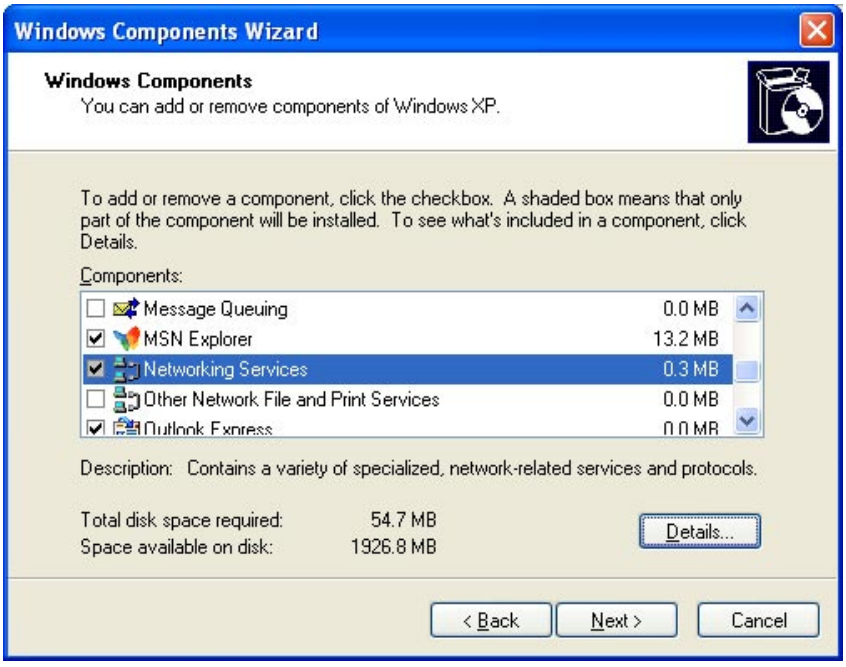
The “Control Panel” will display on the screen and double click **Add or Remove Programs** to continue



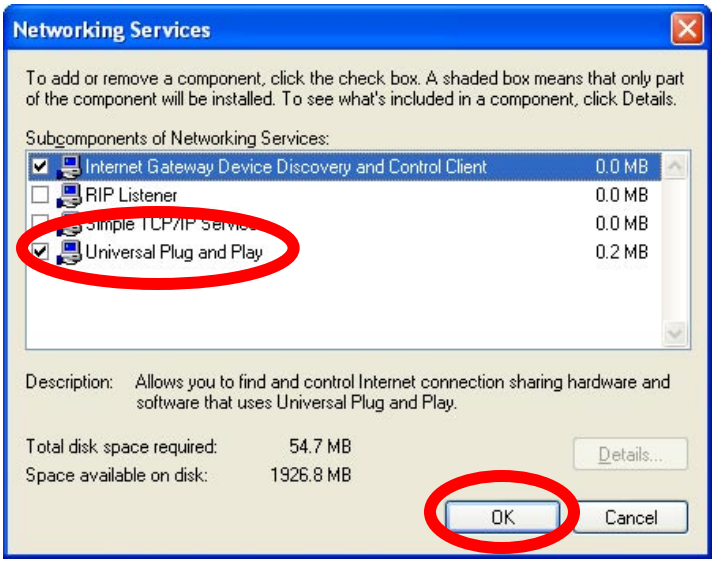
The “Add or Remove Programs” will display on the screen and click **Add/Remove Widows Components** to continue.



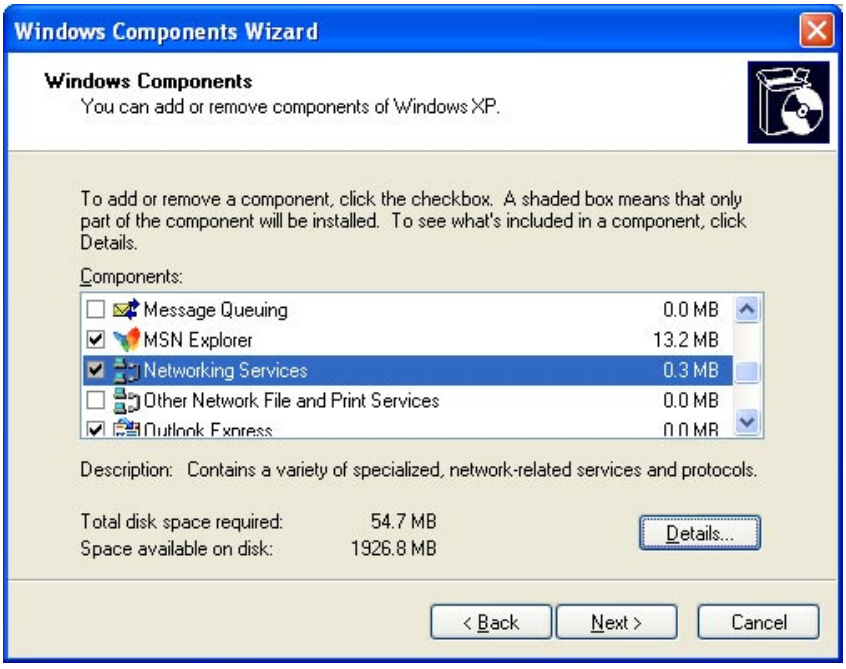
The following screen will appear, select **Networking Services** and click **Details** to continue



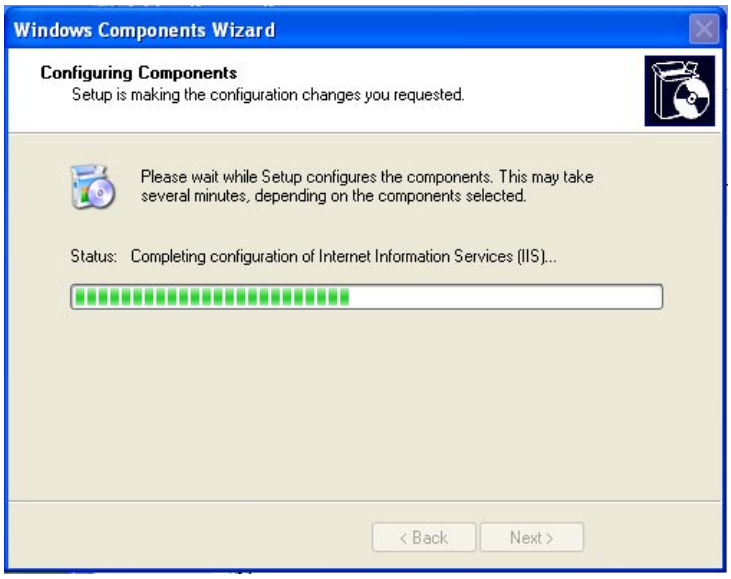
The “Networking Services” will display on the screen, select **Universal Plug and Play** and click **OK** to continue.



Please click **Next** to continue

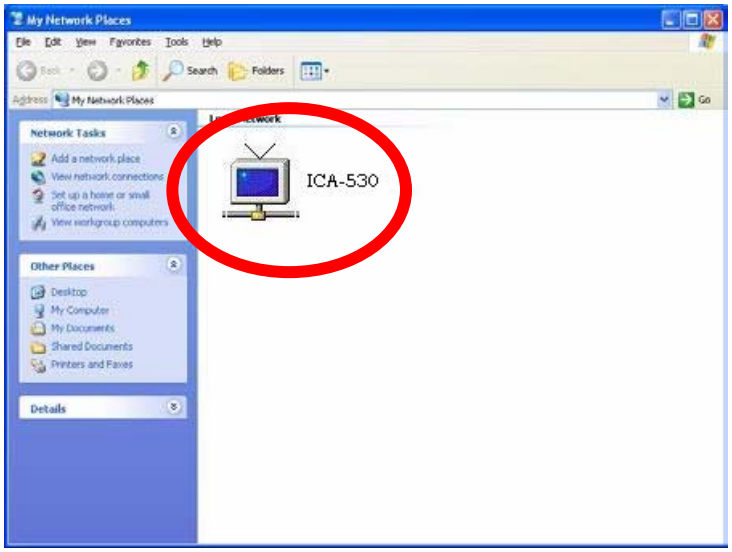


The program will start installing the UPnP automatically. You will see the below pop-up screen, please wait while Setup configures the components.



Please click **Finish** to complete the UPnP installation

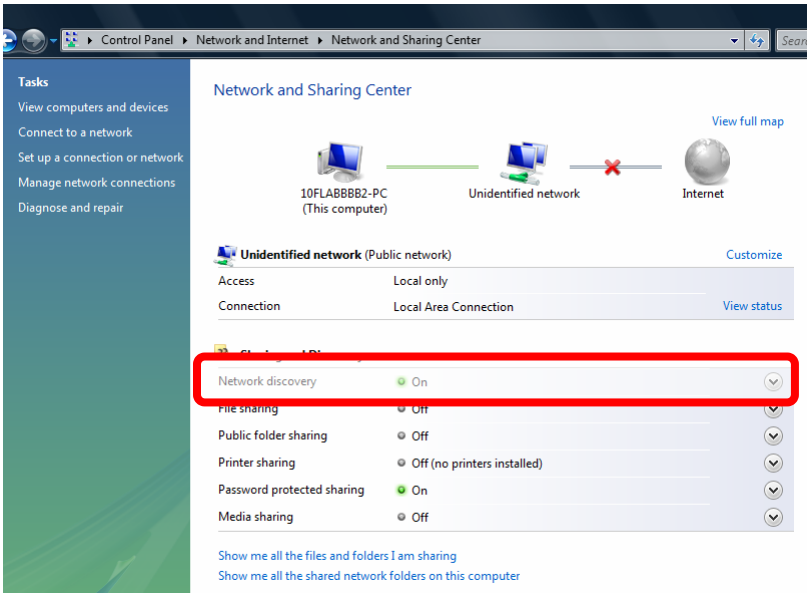
Double-click **My Network Places** on the desktop, the “My Network Places” will display on the screen and double-click the UPnP icon with ICA-530 to view your device in an internet browser.



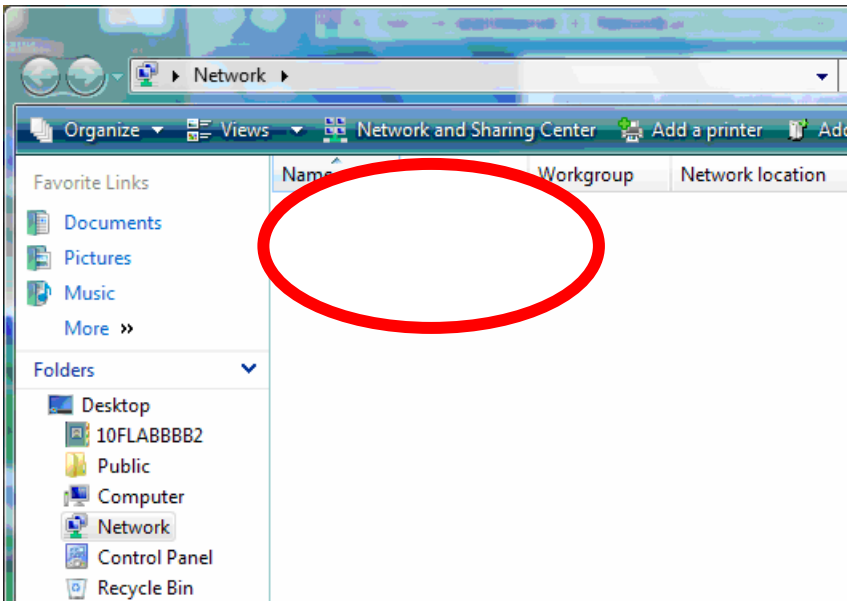
2.7.2 Windows Vista

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows Vista, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows Vista.

Go to **Start > Control Panel > Network and Internet > Network and Sharing Center,** and turn on **Network Discovery**.



Double-click **My Network Places** on the desktop, the “My Network Places” will display on the screen and double-click the UPnP icon with ICA-530 to view your device in an internet browser.



2.8 Setup ActiveX to use the ICA-530

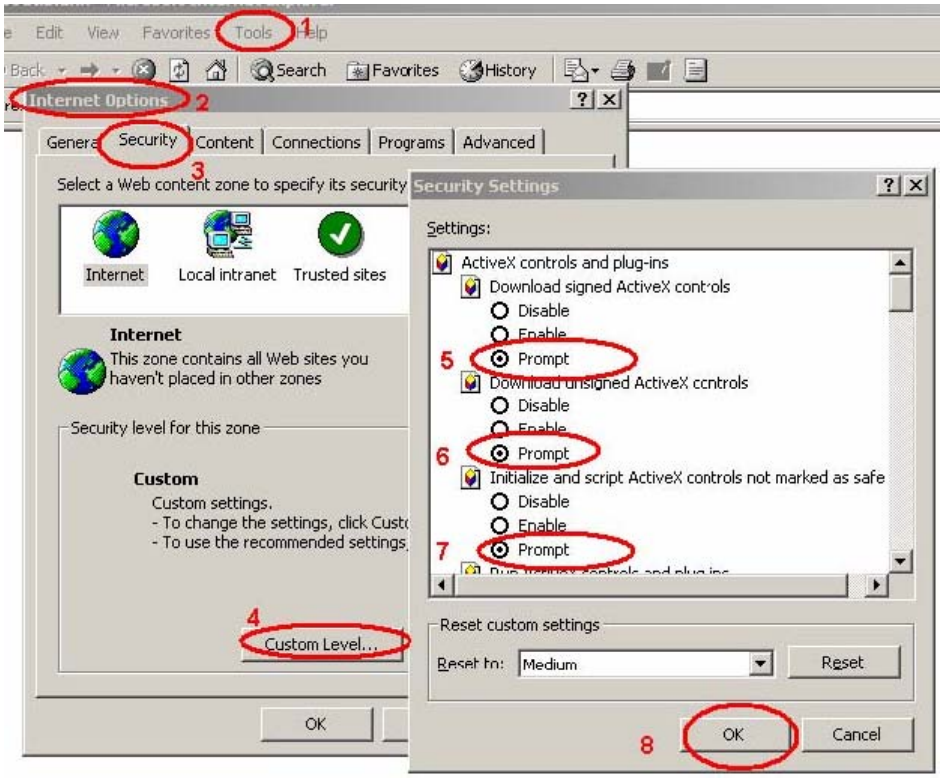
The ICA-530 web pages communicate with the ICA-530 using an ActiveX control. The ActiveX control must be downloaded from the ICA-530 and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the ICA-530, user must setup his IE browser as follows:

2.8.1 Internet Explorer 6 for Windows XP

From your IE browse ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔"Custom Level…", please setup your "Settings" as follow.

Set the first 3 items

- *Download the signed ActiveX controls*
- *Download the unsigned ActiveX controls*
- *Initialize and script the ActiveX controls not masked as safe to Prompt*



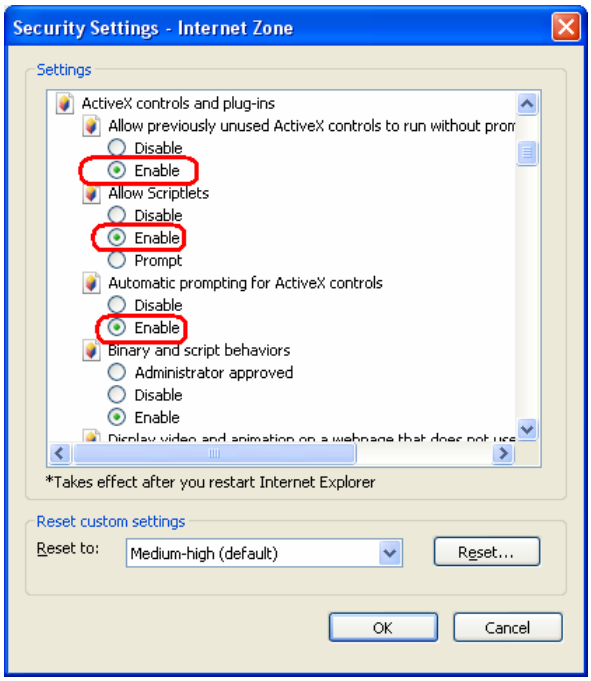
By now, you have finished your entire PC configuration for ICA-530.

2.8.2 Internet Explorer 7 for Windows XP

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔”Custom Level…”, please setup your “Settings” as follow.

Set the first 3 items

- *Allow previously unused ActiveX control to run…*
- *Allows Script lets*
- *Automatic prompting for ActiveX controls*

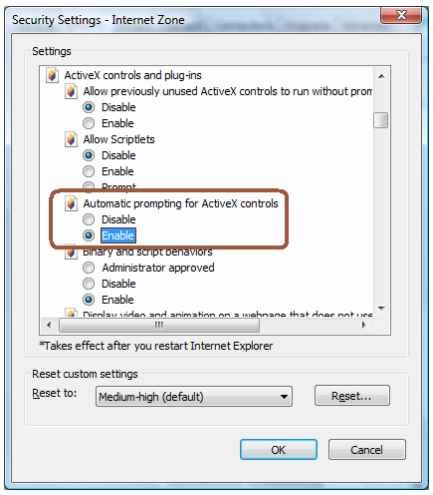


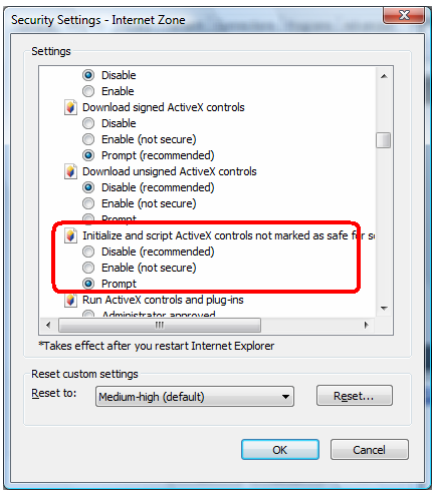
By now, you have finished your entire PC configuration for ICA-530.

2.8.3 Internet Explorer 7 for Windows Vista

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔ ”Internet” ➔”Custom Level…”, please setup your “Settings” as follow.

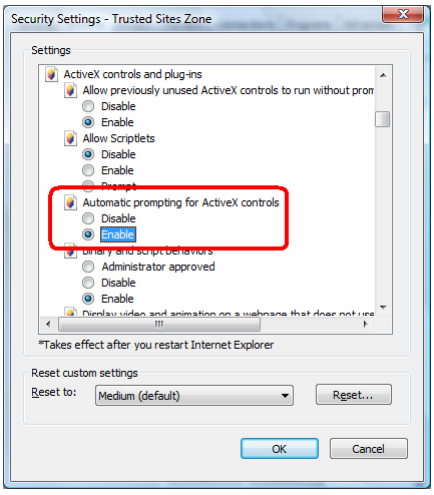
- *Enable “Automatic prompting for ActiveX controls”*
- *Prompt “Initialize and script active controls not marked….”*

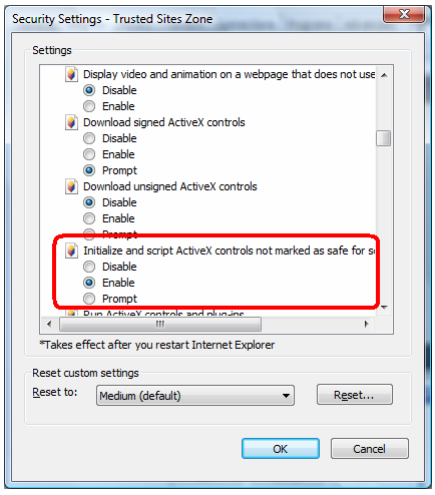




From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔ ”Trusted Sites” ➔”Custom Level…”, please setup your “Settings” as follow.

- *Enable “Automatic prompting for ActiveX controls”*
- *Prompt “Initialize and script active controls not marked….”*





By now, you have finished your entire PC configuration for ICA-530.

3. Web-based Management

This chapter provides setup details of the ICA-530's Web-based Interface.

3.1 Introduction

The ICA-530 can be configured with your Web Browser. Before configure, please make sure your PC is under the same IP segment with ICA-530.

3.2 Connecting to ICA-530

- Use the following procedure to establish a connection from your PC to the ICA-530.
- Once connected, you can add the ICA-530 to your Browser's Favorites or Bookmarks.

Start the web browser on the computer and type the IP address of the ICA-530. The Default IP: " http://192.168.0.20 "

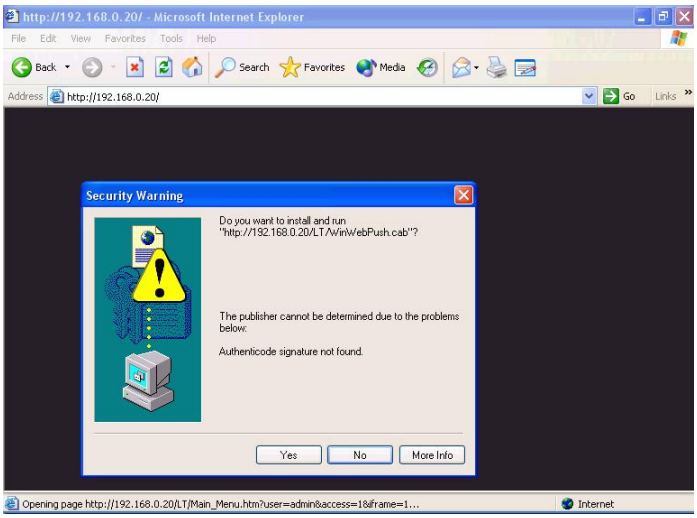
The login window of ICA-530 will appear, Default login **username/password** is :

admin/ <no password>

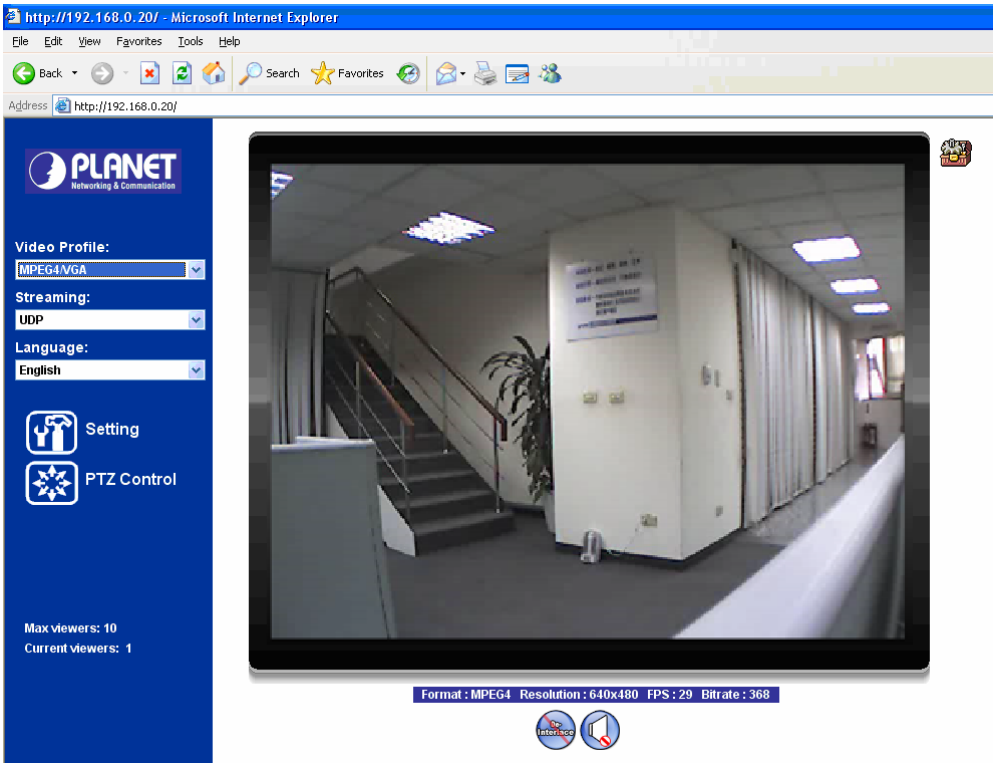
;

NOTE: If the User name and Password have been changed with IP Wizard, please enter the new User name and Password here.

Web browser may display the “Security Warming” window, select “Yes” to install and run the ActiveX control into your PC.



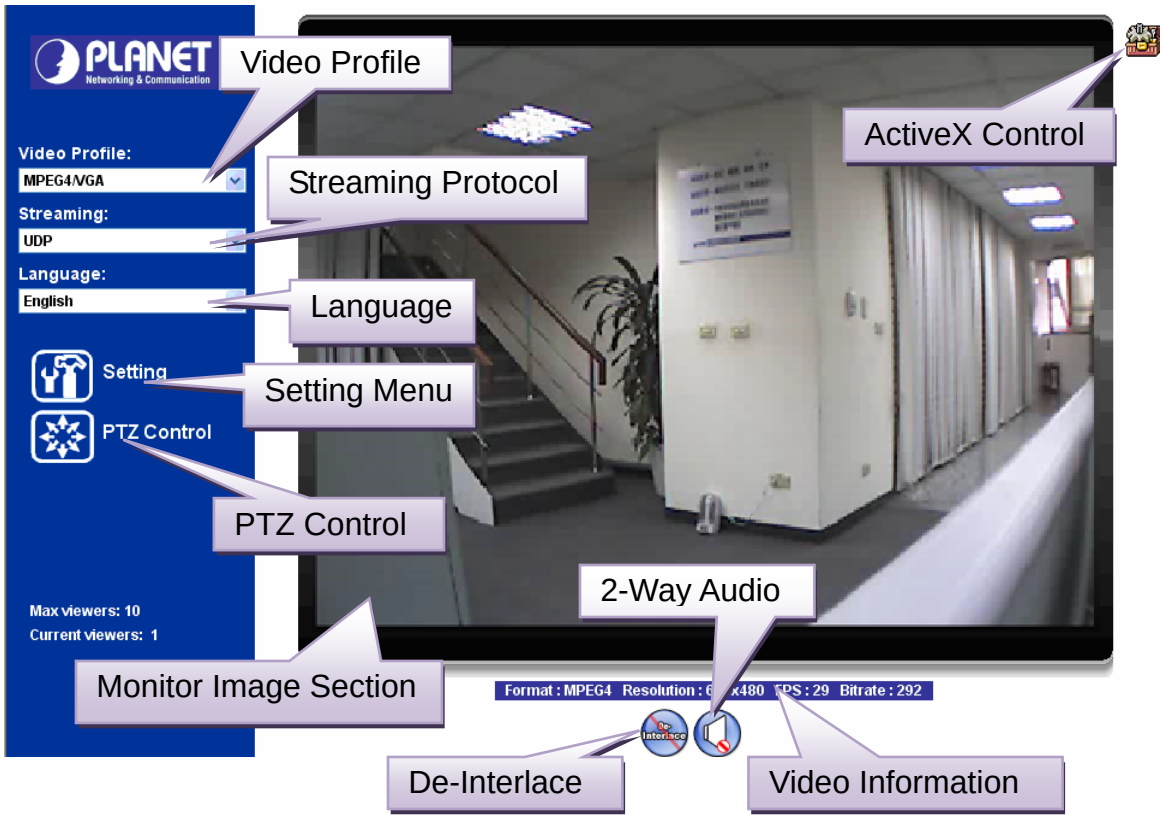
After the ActiveX control was installed and run, the first image will be displayed.



NOTE: If you log in the ICA-530 as an ordinary user, setting function will be not available. If you log in the ICA-530 as the administrator, you can perform all the settings provided within the device.

3.3 Live View

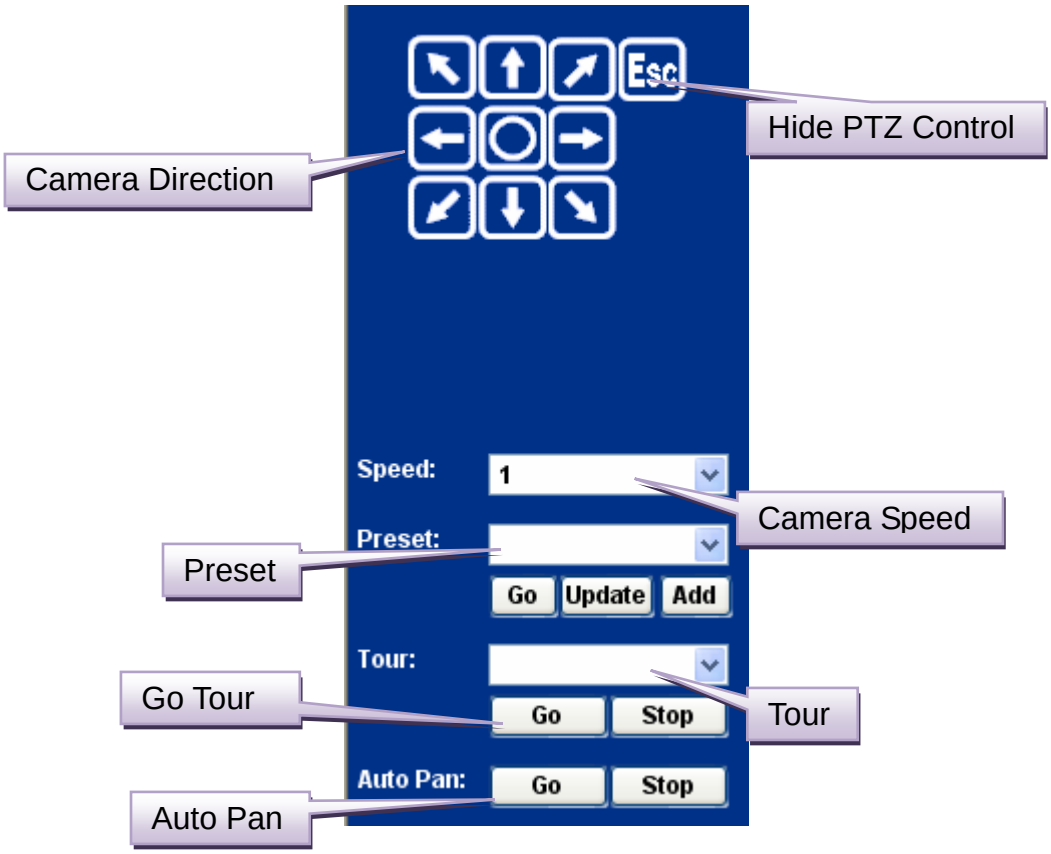
Start-up screen will be as follow no matter an ordinary users or an administrator.



Monitor Image Section	The image shot by the ICA-530 is shown here. The date and time are displayed at the top of the window.
Video Profile	The ICA-530 support multi-profile for both MEPG-4 and M-JPEG simultaneously. User can chose the proper and/or preferred profile here.
ActiveX Control	The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.
2-Way Audio	The ICA-530 supports 2-way audio function. User can chose to enable or disable this function by toggling the icon below : Disable audio uploading function. : Enable audio uploading function.

<table>
<tr><td>De-Interlace</td><td>The device also supports de-interlace function inside ActiveX. User can chose to enable or disable this function by toggling the icon below.
 : Disable de-interlace function.
 : Enable de-interlace function.</td></tr>
<tr><td>Setting Menu</td><td>This function is detail setting for ICA-530 that only available for user logged into ICA-530 as administrator.
<table><tr><th>Item</th><th>Action</th></tr><tr><td>Network</td><td>Configure Network settings such as DHCP, DDNS, 3GPP, PPPoE and UPnP</td></tr><tr><td>Camera</td><td>Adjust camera parameters</td></tr><tr><td>System</td><td>Configure system information, date & time, maintenance, and view system log file.</td></tr><tr><td>Video</td><td>Configure bit rate and frame rate of video profiles</td></tr><tr><td>Audio</td><td>Configure audio parameters</td></tr><tr><td>User</td><td>Setup user name, password and login privilege</td></tr><tr><td>E-Mail</td><td>Setup E-Mail configuration</td></tr><tr><td>Object Detection</td><td>Setup Object detection</td></tr><tr><td>Event Server</td><td>This device is a client site and configure information to upload images to server</td></tr><tr><td>Event Schedule</td><td>Configure the schedule while event triggered</td></tr></table></td></tr>
<tr><td>Streaming Protocol</td><td>User can select proper streaming protocol according to networking environment.</td></tr>
<tr><td>Language</td><td>The device could provide multiple languages to meet customer’s requirement.</td></tr>
<tr><td>Video Information</td><td>Display video information including video format, resolution, frame rate and bit rate.</td></tr>
</table>

PTZ Control	Click to display the following control panel:



Hide PTZ Control	Click the icon will hide the PTZ control function.
Camera Direction	Control camera up/down/left/right and home position.
Camera Speed	Choose the speed of Pan and Tilt.
Preset	Add/Update the preset positions or go to one of these positions.
Tour	Select one of the camera tours. Camera tour is comprised by series of preset locations.
Go Tour	Execute the selected camera tour.
Auto Pan	Execute the auto pan of camera. While auto pan is running, the camera will swing the camera automatically. Note that the speed of auto pan is fixed and cannot be adjustable.

3.4 ActiveX Control

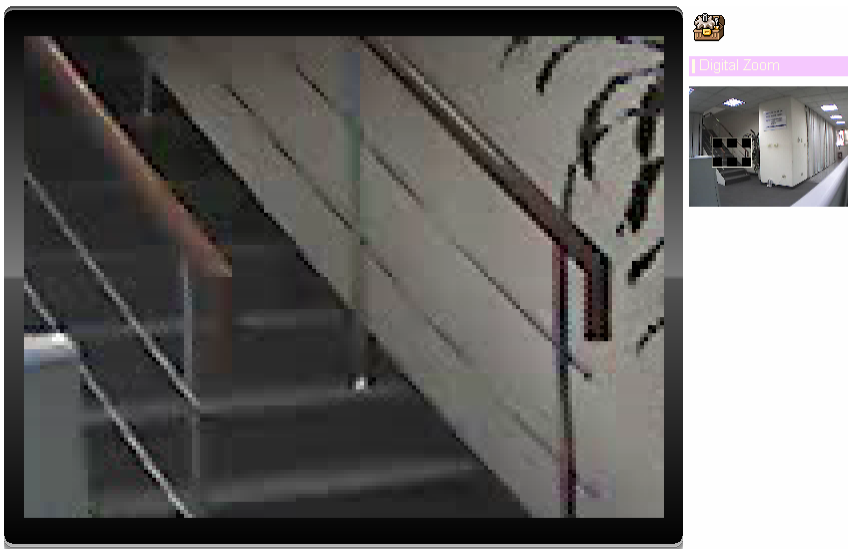
The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control icon, click the LeftMouseButton, then a menu pop-up. This menu provides features that are unique to the ActiveX control. These features include:

- *"Digital Zoom",*
- *"Record",*
- *"Snapshot",*
- *"Voice",*
- *"Statistics",*
- *"About"*

3.4.1 Digital Zoom

Click **Digital Zoom** to active this function as above. User can drag or scale the box over the video to adjust zoom ratio and position.



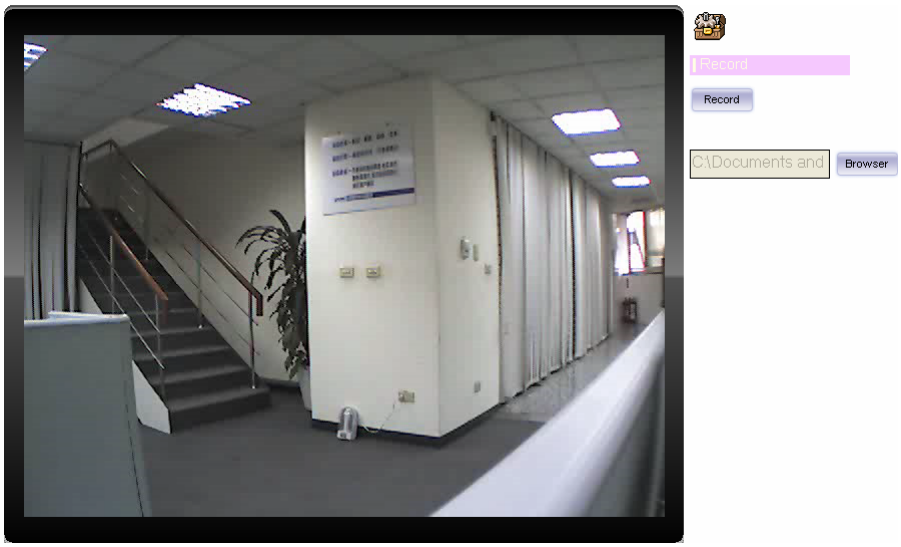
3.4.2 Record

Click **Record** to activate this function. Press **Record** button to start recording. The video file is saved as ASF format into your local PC. While you want to stop it, press **Stop** to stop recording. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

After stop recording, list the files, this file is named as Video_yyyymmddhhmmss.asf

The ASF files can be display by the standard Windows Media Player, but it needs the DixectX 9.0 or later version to be installed.

NOTE: Default save path is “C:\Documents and Settings\All user\Desktop

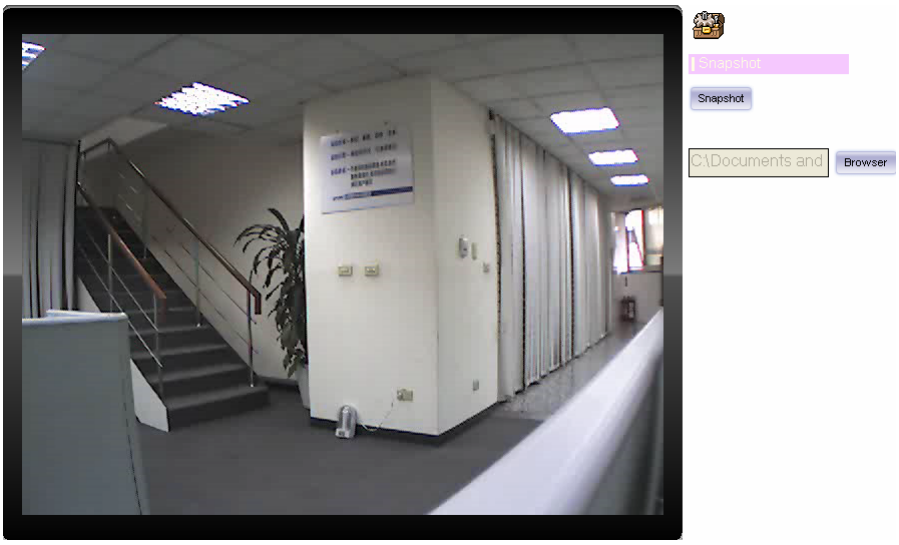


3.4.3 Snapshot

Click **Snapshot** to activate this function. Press **Snapshot** button to take a picture. The image file is saved as JPEG format into your local PC. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

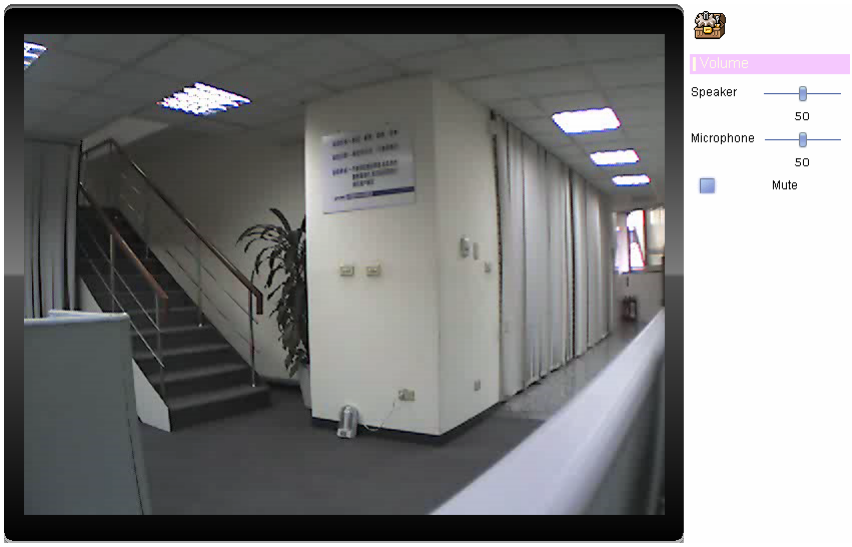
If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

NOTE: Default save path is “C:\Documents and Settings\All user\Desktop



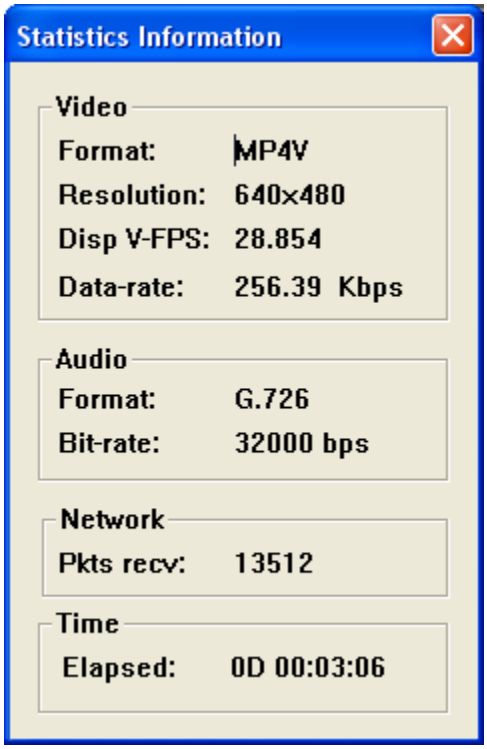
3.4.4 Voice

Click Volume to activate this function. These have two control bars for speaker and microphone volume. Scroll this control bar to adjust the audio attribute. Check the volume mute will mute the speaker output.



3.4.5 Statistics

Click **Statistics** to activate this function. A window will be popup to show the statistics information of the streaming status. **Note** that this information is the statistics between the device and your local PC.



3.4.6 About

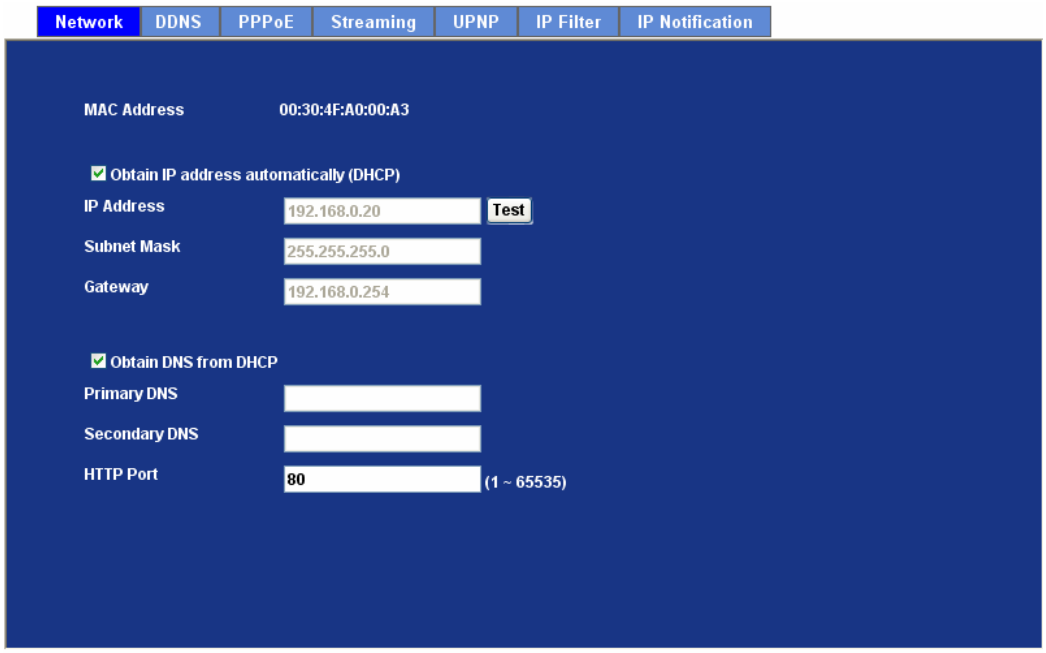
Click **About** to show the ActiveX information

3.5 Network

Use this menu to configure the network to connect the device and the clients.

3.5.1 Network

This section provides the menu of connecting the device through Ethernet cable.



MAC Address	Display the Ethernet MAC address of the device. Note that user cannot change it.
Obtain an IP address automatically (DHCP)	DHCP: Stands for Dynamic Host Configuration Protocol. Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically. If this device cannot get an IP address within limited tries, the device will assign a default IP address, 192.168.0.20, by itself as the default IP address.
IP address, Subnet mask, Gateway, 1st DNS, 2nd DNS server	If you do not select Obtain an IP address automatically, then you need to enter these network parameters by yourself.
IP Address	This address is a unique numbers that identifies a computer or device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200
Subnet Mask	Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111

	11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.
Gateway	A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.
Primary DNS	When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.
Secondary DNS	The same function as DNS1. It is option not necessary
Note: need to reboot the device to take this setting effect.	
HTTP Port	The device supports two HTTP ports. The first one is default port 80 and this port is fixed. This port is very useful for Intranet usage. The second HTTP port is changeable. Users could assign the second port number of http protocol, and the WAN users should follow the port number to login. If the http port is not assigned as 80, users have to add the port number in back of IP address. For example: http://192.168.0.20:80. If multiple devices are installed on the LAN and also required to be accessed from the WAN, then the **HTTP Port** can be assigned as the virtual server port mapping to support multiple devices.
When the configuration is finish, please click “OK” to save and enable the setting.	

3.5.2 DDNS server

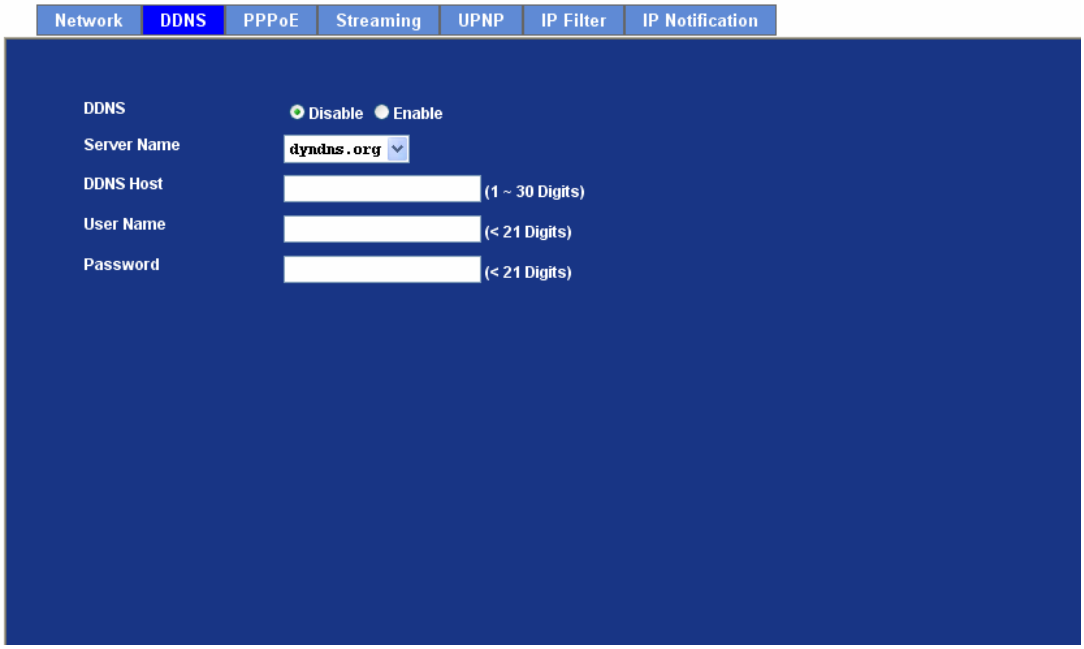
DDNS: Stands for Dynamic Domain Name Server

The device supports DDNS. If your device is connected to xDSL directly, you might need this feature. However, if your device is behind a NAT router, you will not need to enable this feature. Because DDNS allows the device to use an easier way to remember naming format rather than an IP address. The name of the domain is like the name of a person, and the IP address is like his phone number. On the Internet we have IP numbers for each host (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary. For more DDNS configuration, please consult your dealer.

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it’s likely to change periodically. Just how often it changes, depends on your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN IP address is when you want to access your network over the Internet. The solution to the dynamic

IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names are just easy to remember aliases for IP addresses. A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet and best of all they're free to use. One such service you can use is www.DynDNS.org. You'll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions or refer to Appendix D for more information.



DDNS	To enable or disable the DDNS service here.
Server Name	Choose the built-in DDNS server.
DDNS Host	The domain name is applied of this device.
User Name	The user name is used to log into DDNS.
Password	The password is used to log into DDNS.

3.5.3 PPPoE

PPPoE: Stands for Point to Point Protocol over Ethernet

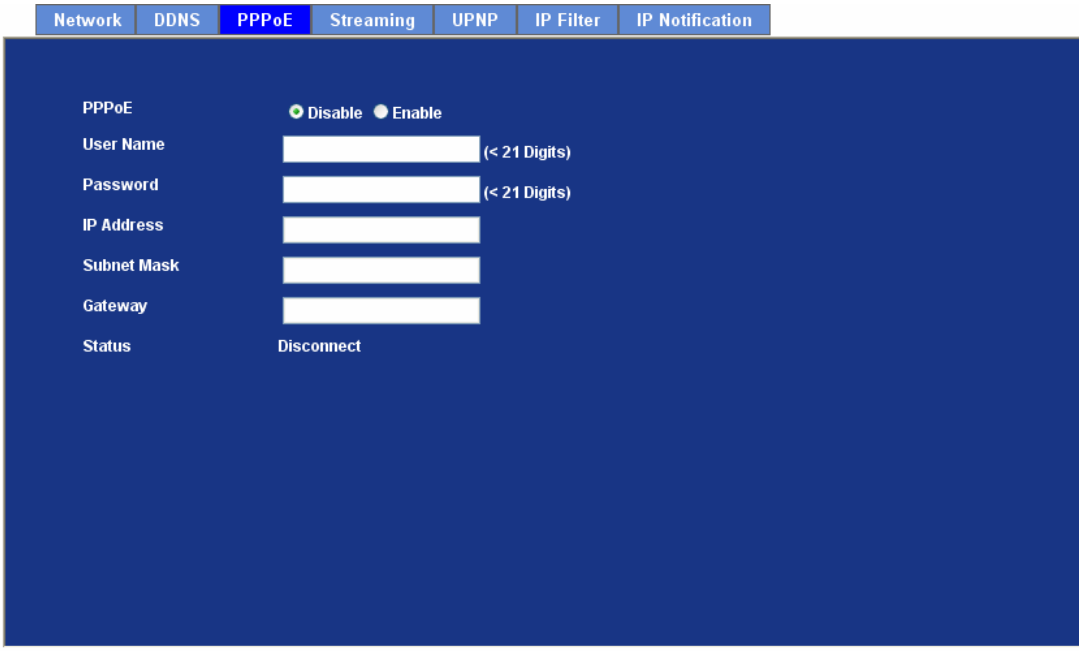
A standard builds on Ethernet and Point-to-Point network protocol. It allows ICA-530 connect to Internet with xDSL or cable connection; it can dial up your ISP and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your ISP.

It can directly connect to the xDSL, however, it should be setup on a LAN environment to program the PPPoE information first, and then connect to the xDSL modem. Power on again, then the device will dial on to the ISP connect to the WAN through the xDSL modem.

The procedures are

• Connect to a LAN by DHCP or Fixed IP

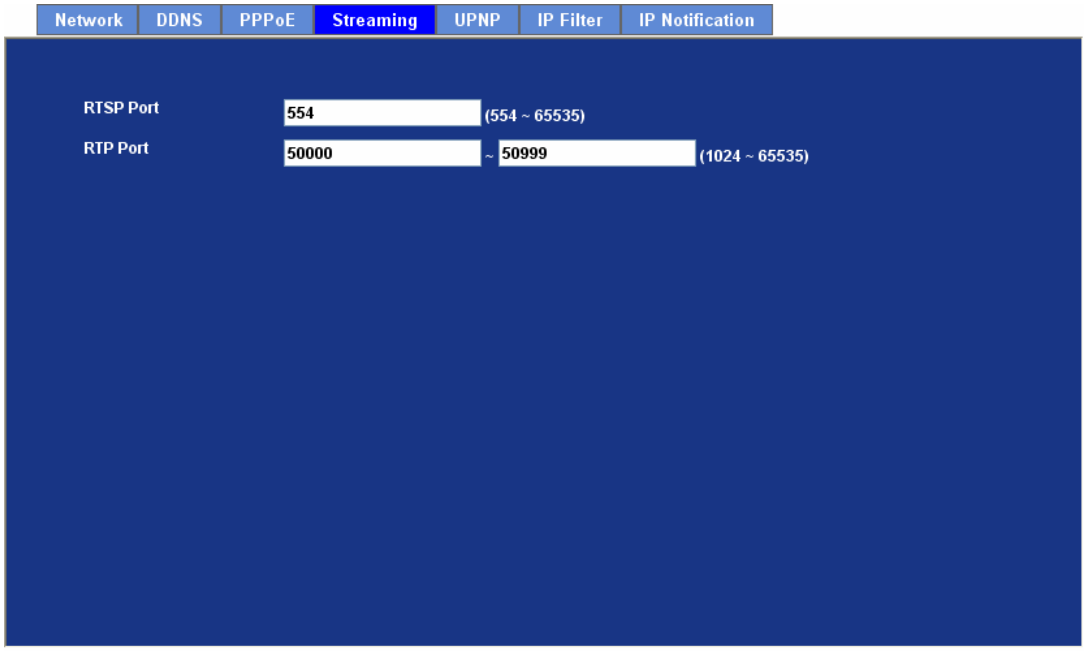
• Access the device, enter **Setting ➔ Network ➔ PPPoE** as below



PPPoE	To enable or disable the PPPoE service here.
User Name	Type the user name for the PPPoE service which is provided by ISP.
Password	Type the password for the PPPoE service which is provided by ISP.
IP Address, Subnet Mask, and Gateway	Shows the IP information got from PPPoE server site.
Status	Shows the Status of PPPoE connection.

3.5.4 Streaming

RTSP is a streaming control protocol, and a starting point for negotiating transports such as RTP, multicast and Unicast, and for negotiating codecs. RTSP can be considered a "remote control" for controlling the media stream delivered by a media server. RTSP servers typically use RTP as the protocol for the actual transport of audio/video data.



RTSP Port	Choose the RTSP port. The RTSP protocol allows a connecting client to start a video stream. Enter the RTSP port number to use. The default value is 554.
RTP Port	Specify the range of transmission port number of video stream. The default range is 50000 to 50999. User can specify a number between 1024 and 65535.

To use the 3GPP function, in addition to previous section, you might need more information or configuration to make this function work.

NOTE: To use the 3GPP function, it strongly recommends installing the Networked Device with a public and fixed IP address without any firewall protection.

RTSP Port	Port 554 is the default for RTSP service. However, sometimes, some service providers change this port number for some reasons. If so, user needs to change this port accordingly.

Dialing procedure

1. Choose a verified player (PacketVideo or Realplayer currently)
2. Use the following URL to access: **rtsp://host/mpeg4/media.3gp**

Where host is the host name or IP address of the camera.

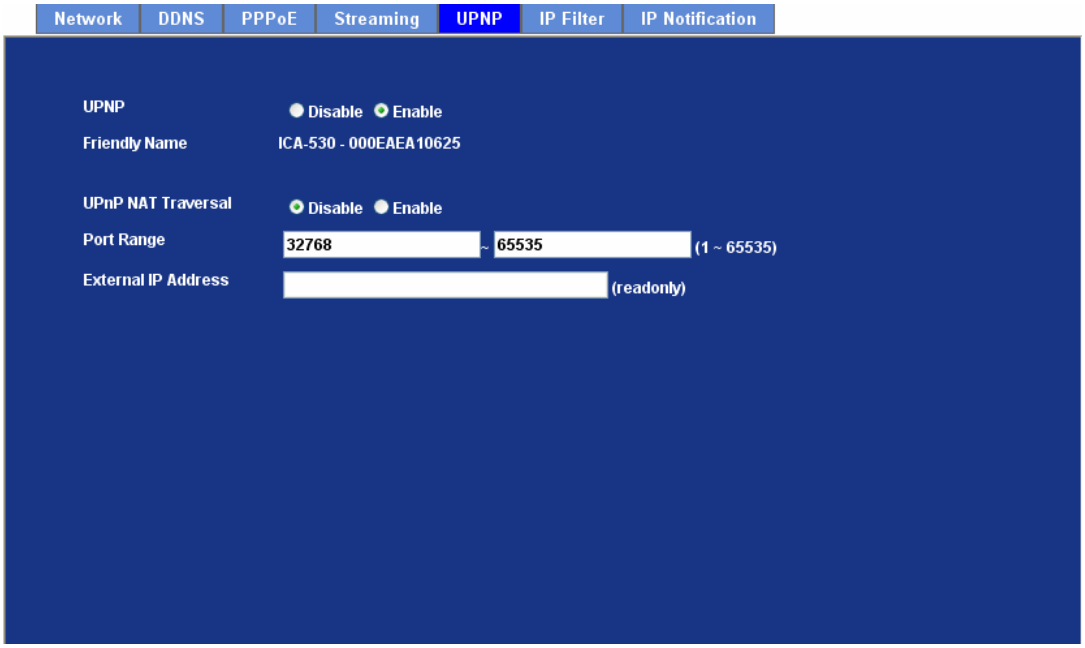
Compatible 3G mobile phone	Please contact your dealer to get the approved list of compatible 3G phone.

3.5.5 UPnP

UPnP is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled Network Camera. If your operating system is UPnP enabled, the device will automatically be detected and a new icon will be added to “My Network Places.” If you do not want to use the UPnP functionality, it can be disabled

In addition, this device also provides UPnP IGD function for NAT traversal easily. Use NAT

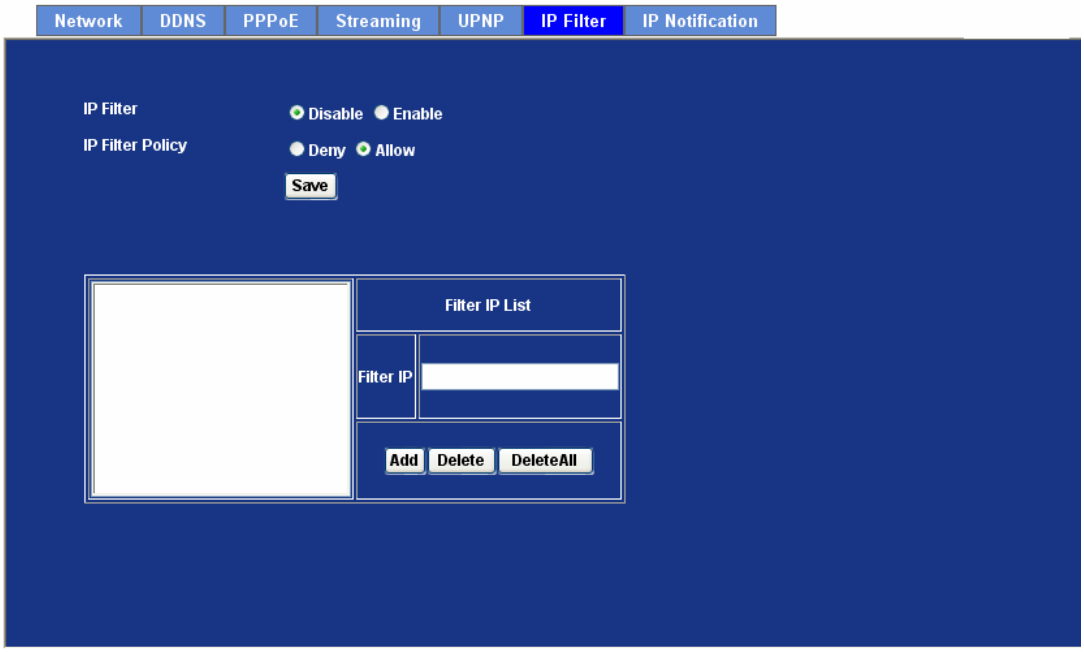
traversal when your device is located on an intranet (LAN) and you wish to make it available from the other (WAN) side of a NAT router. With NAT traversal properly configured, all HTTP traffic to an external HTTP port in the NAT router will be forwarded to the device.



UPnP	To enable or disable the UPnP service here.
Friendly Name	Shows the friendly name of this device here.
UPnP NAT Traversal	When enabled, the device will attempt to configure port mapping in a NAT router on your network, using UPnP™. Note that UPnP™ must be enabled in the NAT router first.
Port Range	The port range will open in NAT router.
External IP Address	Show the IP address and port for WAN access through Internet. If NAT traversal is configured successfully, user can use this IP address and port to access this device.

3.5.6 IP Filter

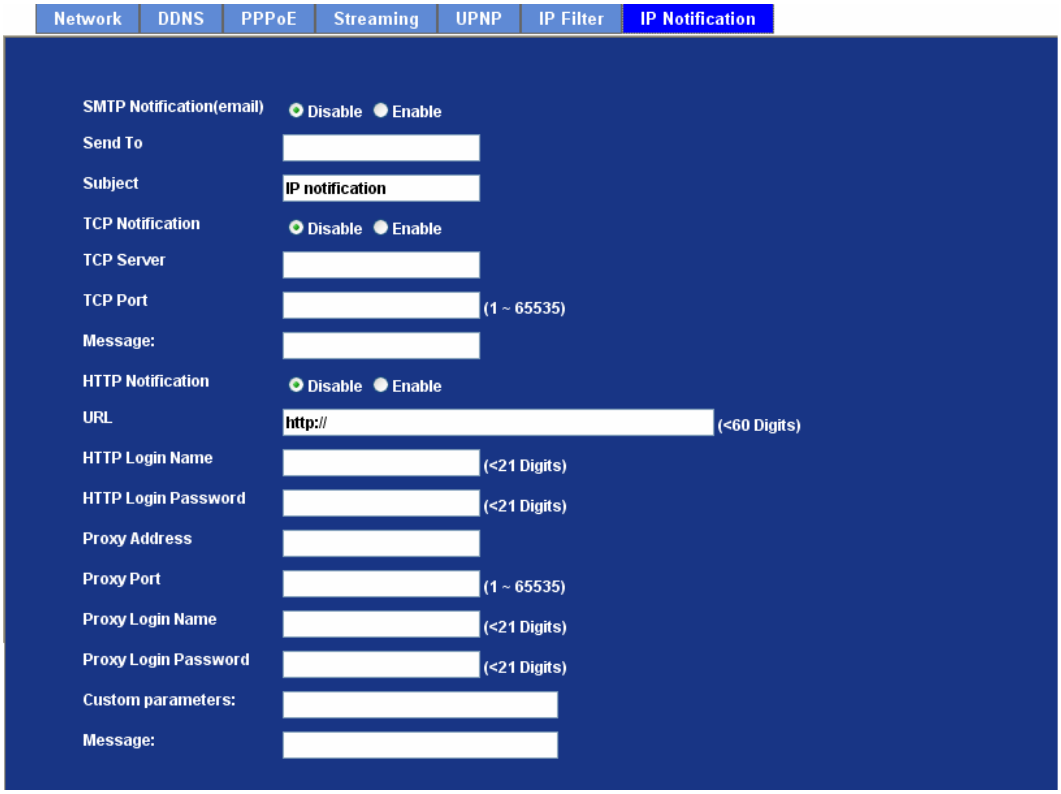
You can enter different user's IP address which are allowing enter or denying by the device.



IP Filter	To enable or disable the IP filter function here.
IP Filter Policy	Choose the filter policy where is denying or allowing.

3.5.7 IP Notification

In case the IP address is changed, system is able to send out an email to alert someone if the function is enabled.



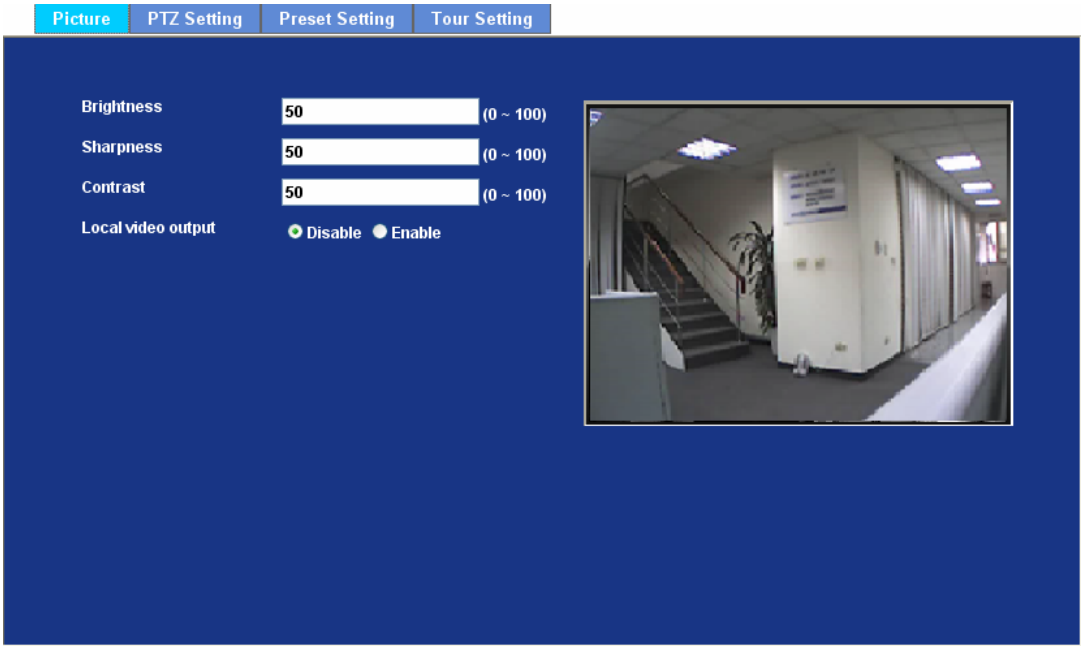
SMTP Notification (e-mail)	If enable this function, then the "**Send to**" and "**Subject**" field need to be filled.
Send To	Type the receiver's e-mail address. This address is used for reply mail.
Subject	Type the subject/title of the E-mail.
TCP Notification	If enable this function, then the "**TCP Server**", "**TCP Port**", and "**Message**" fields need to be filled.
TCP Server	Type the server name or the IP address of the TCP server.
TCP Port	Set port number of TCP server.
Message	The message will be sent to FTP server.
HTTP Notification	If enable this function, then the fields below need to be filled.
URL	Type the server name or the IP address of the HTTP server.
HTTP Login Name	Type the user name for the HTTP server.
HTTP Login Password	Type the password for the HTTP server.
Proxy Address	Type the server name or the IP address of the HTTP Proxy.

Proxy Port	Set port number of Proxy.
Proxy Login Name	Type the user name for the HTTP Proxy.
Proxy Login Password	Type the password for the HTTP Proxy.
Custom Parameter	User can set specific parameters to HTTP server.
Message	The message will be sent to HTTP server.

3.6 Camera

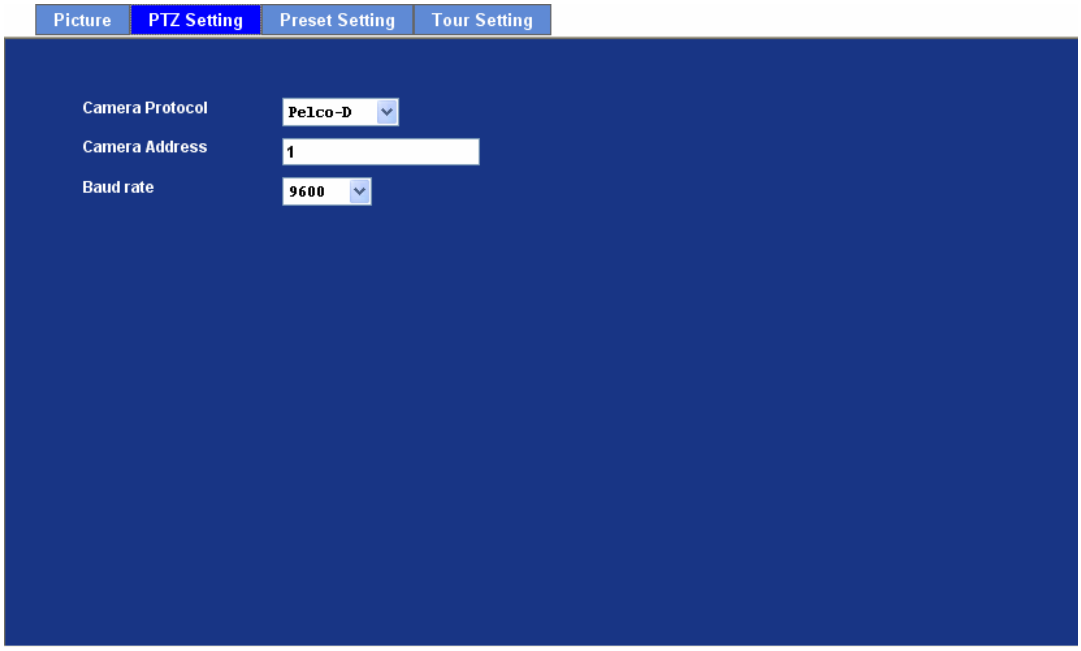
Use this menu to set the function of the camera of ICA-530

3.6.1 Picture



Brightness	Large value will brighten camera.
Sharpness	Large value will sharpen camera.
Contrast	Large value will contrast camera heavily.
Local Video Output	Check this item if a TV or video monitor has been connected to video output of the Network Camera. Un-check it if not any device has been connected. Otherwise, the image will be too brightness

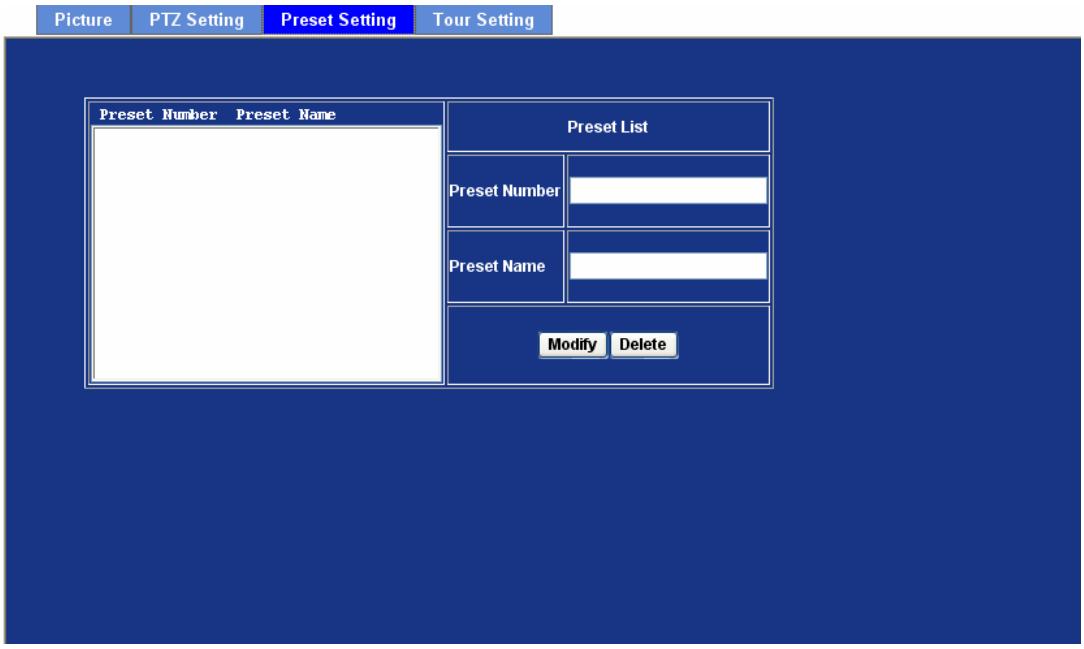
3.6.2 PTZ Setting



PTZ Protocol Type	The Network Camera is connected to built-in ICA-530 and controls this device thru RS485 bus.
Baud Rate	This is the communication speed between network module and ICA-530. Note that please DO NOT changes the default value except on special purpose. If so, user needs to check and set value properly for both sides
Camera ID	This is the camera ID set in speed dome camera. Note that please DO NOT changes the default value except on special purpose. If so, user needs to check and set value properly for both sides

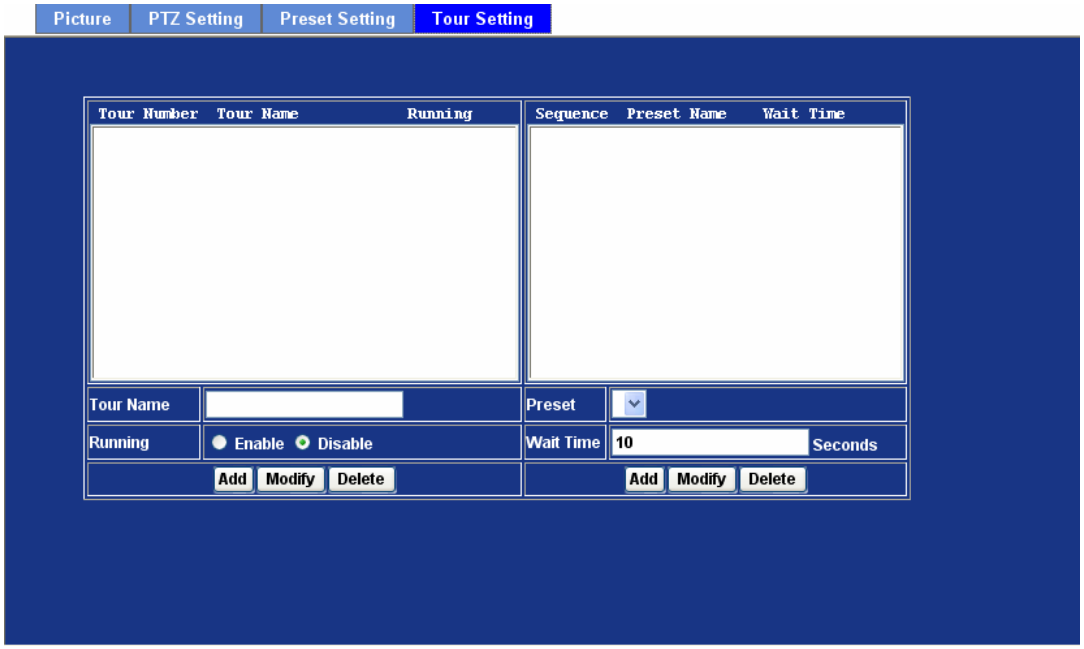
3.6.3 Preset Setting

This page provides the edit tool to modify or delete the “Preset Setting” item by item.



3.6.4 Tour Setting

Up to 64 positions can be preset, and the camera can be programming to move to the preset position sequentially.



Tour Name	The group name of the sequence of camera tour. The maximum number of camera tour is 16.

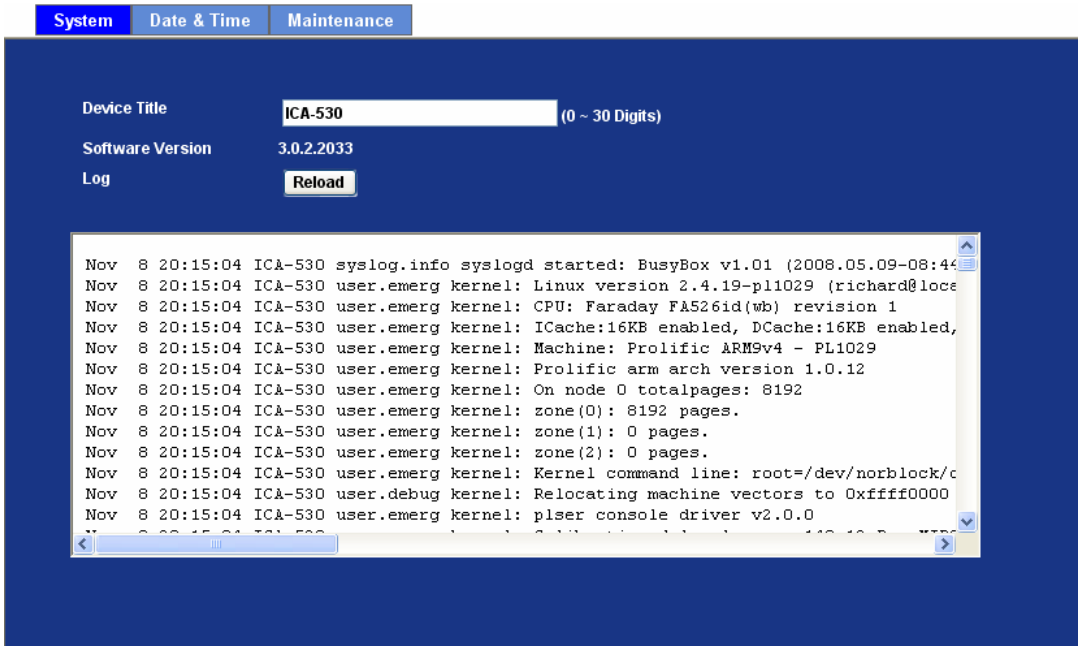
Running	Enable or disable this camera tour.
Preset	Set the sequence of the tour. Maximum 16 points can be assigned. The selected preset position is added in the Sequence list from 1 to 16.
Wait Time	Type a period of time during which the camera is to stay at each preset point, between 0 to 36000 seconds.

To use the camera tour function, user must preset some camera positions first. The maximum number of preset points is 64.

3.7 System

Use this menu to perform the principal settings of ICA-530.

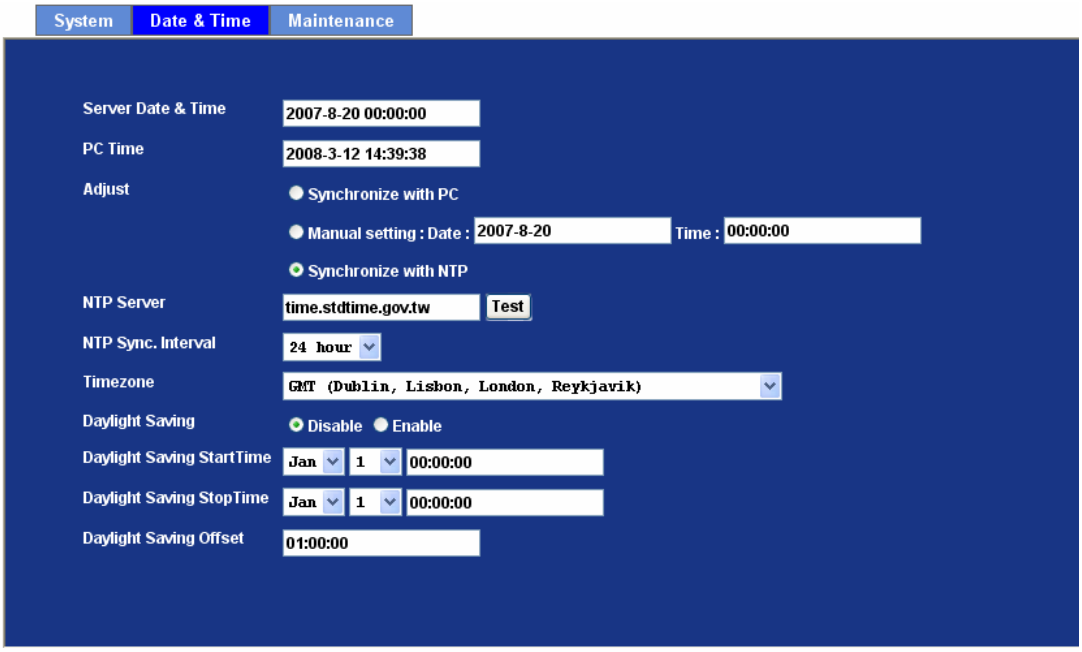
3.7.1 System



Device Title	You can enter the name of this unit here. It's very useful to identify the specific device from multiple units.
Software Version	This information shows the software version in the device.
Log	User can check the system log information of the device, including the Main Info, Appended Info, Operator IP, and so on …

3.7.2 Date & Time

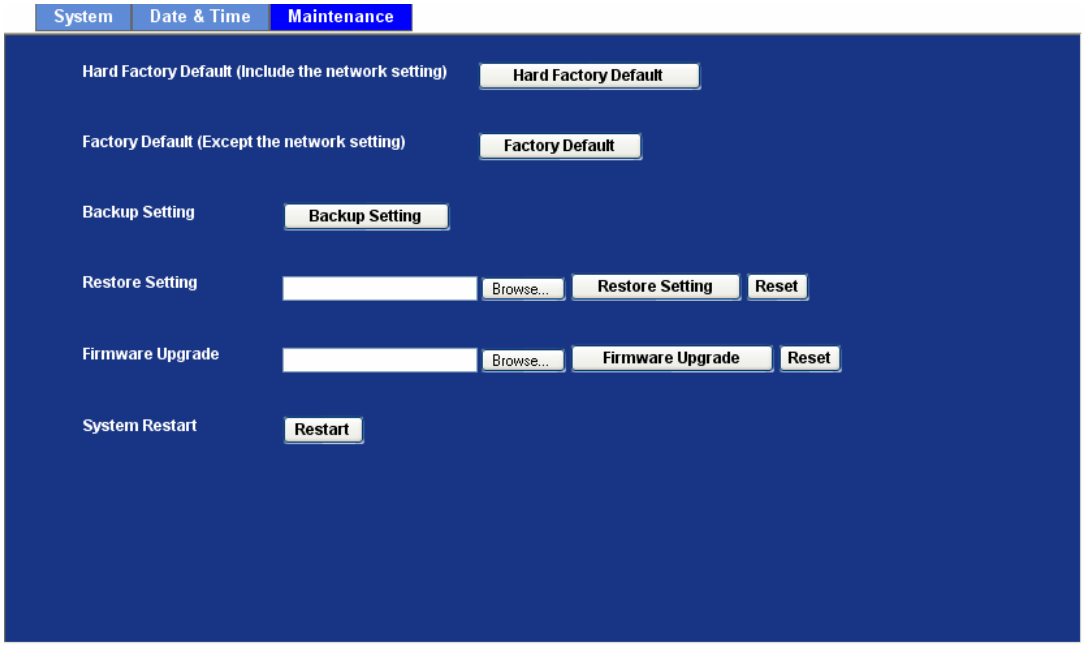
You can setup the time setting of ICA-530, make it synchronized with PC or remote NTP server. Also, you may select the correct time zone of your country.



Server Date & Time	Displays the date and time of the device	
PC Time	Displays the date and time of the connected PC	
Adjust	**Manual setting:**	Click this option to set time and date manually
	Synchronize with NTP:	Click this option if you want to synchronize the device's date and time with those of time server called NTP server (Network Time Protocol)
	Synchronize with PC:	Click this option to enable time synchronization with PC time
NTP Server Name	Type the host name or IP address or domain name of the NTP server.	
NTP Sync. Interval	Select an interval between 1 and 23 hours at which you want to adjust the device's time referring to NTP server	
Time Zone	Set the time difference from Greenwich Mean Time in the area where the device is installed.	
Daylight Saving	Check this item to enable daylight saving adjustment.	
Daylight Saving Start Time	Sets up the date and time of daylight saving start time.	

Daylight Saving Stop Time	Sets up the date and time of daylight saving stop time.
Daylight Saving Offset	Sets up the date of daylight saving offset.

3.7.3 Maintenance



Hard Factory Default (Include the network setting)	Recall the device hard factory default settings. Note that click this button will reset all device's parameters to the factory settings (including the IP address).
Factory Default (Except the network setting)	The unit is restarted and most current settings are reset to factory default values. This action will not reset the network setting.
Backup Setting	To take a backup of all of the parameters, click this button. If necessary, it will then be possible to return to the previous settings, if settings are changed and there is unexpected behavior.
Restore Setting	Click the "Browse" button to locate the saved backup file and then click the "Restore Setting" button. The settings will be restored to the previous configuration.
Firmware Upgrade	The device supports new firmware upgrade. 1. Close all other application programs which are not necessary for firmware update. 2. Make sure that only you access this device at this moment

	3. Disable Motion Detection function. 4. Select "**Firmware name**" 5. Select the Firmware binary file. (**Note** that it must make sure that the Firmware only applies to this device, once update, it will be burned into FLASH ROM of system.) 6. Once the firmware file was selected, select "Upgrade". 7. The upgrade progress information will be displayed on the screen. 8. A message will be shown while the firmware upgraded. Once the upgrading process completed, the device will reboot the system automatically. 9. Please wait for 80 seconds, and then you can use IP Wizard to search the device again.

Warning!!! The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the device.

Please be aware that you should not turn off the power during updating the firmware and wait for finish message.

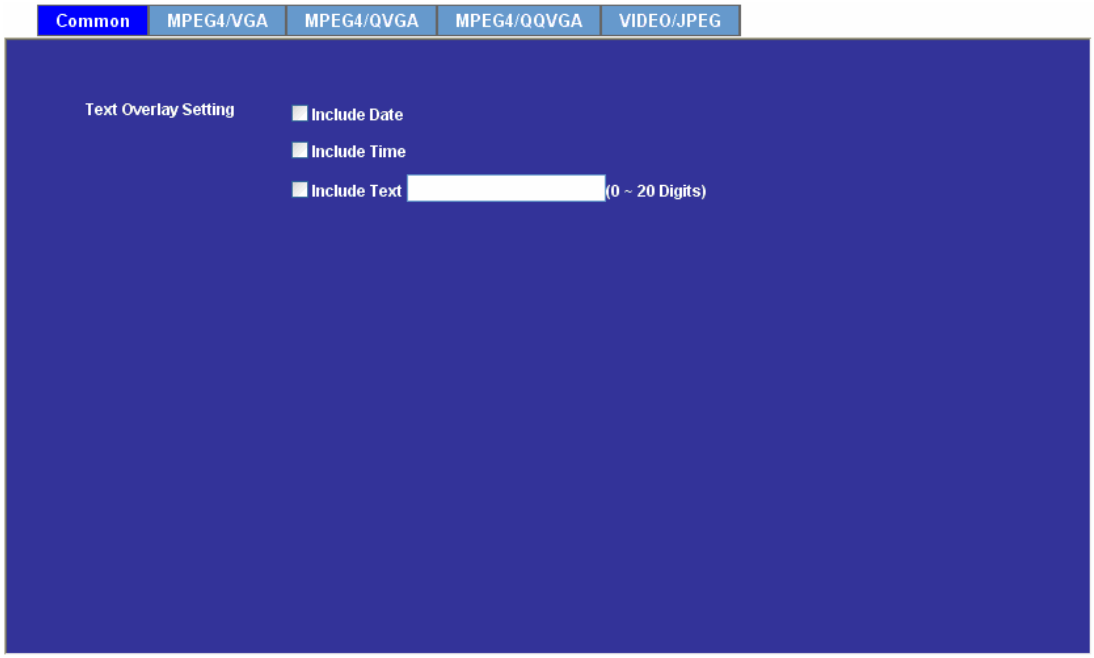
Furthermore, do not try to upgrade new firmware if it's not necessary.

System Restart	The device is restarted without changing any of the settings.

3.8 Video

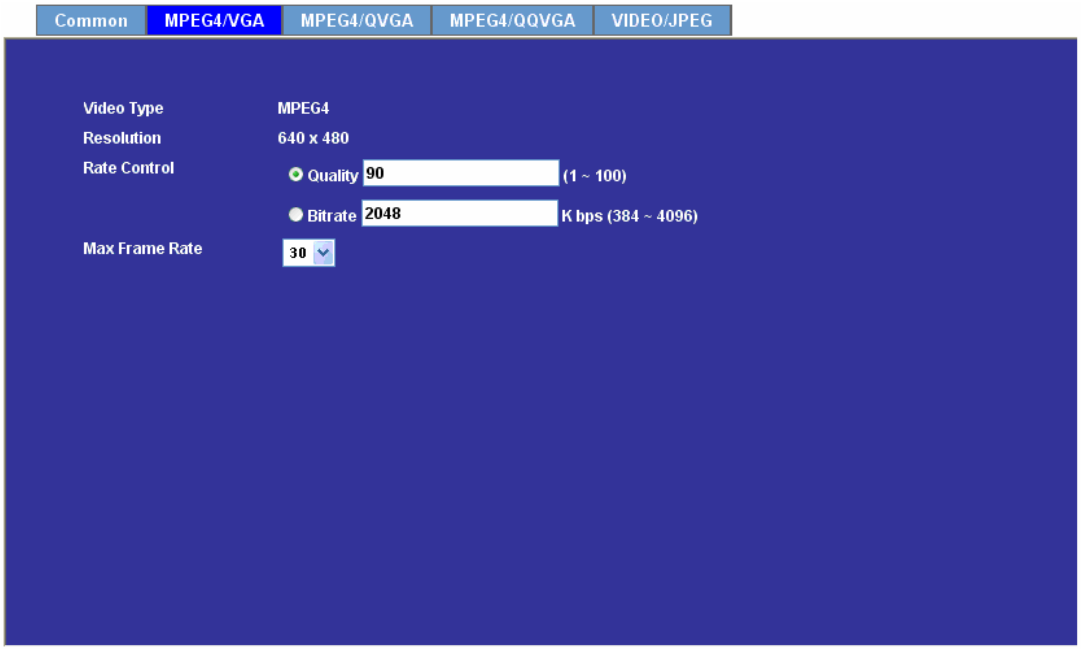
This device provides more video profiles as below to support different request to each client simultaneously. Each user can choose his preferred video profile as his request independently.

3.8.1 Common



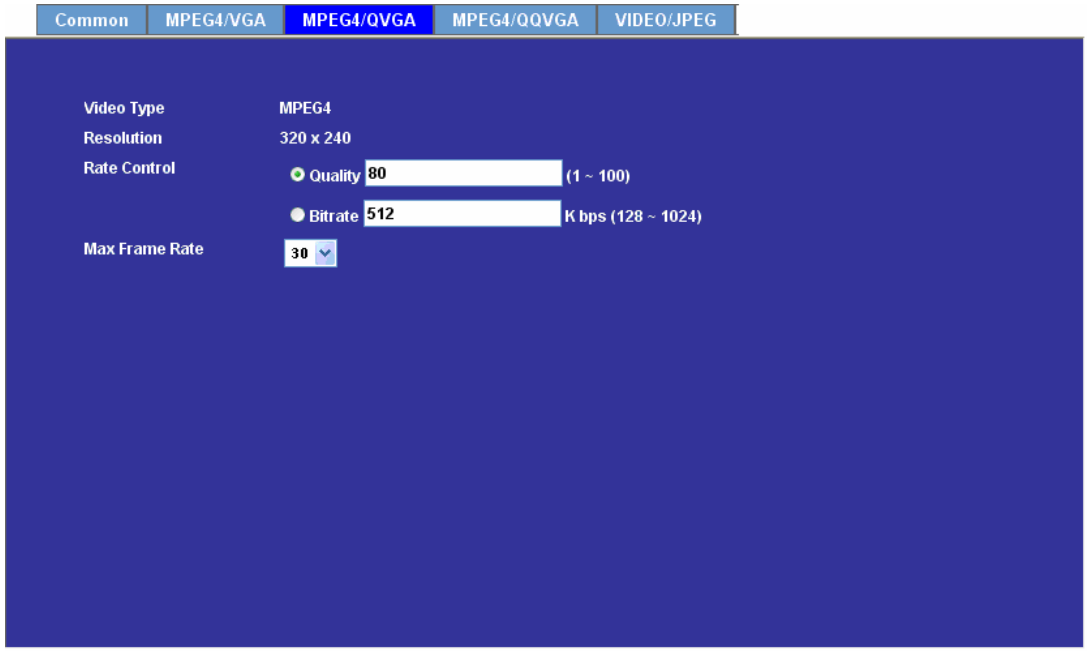
Text Overlay Setting	There are some important information can be embedded into image, including date, time, and/or text.

3.8.2 MPEG4/VGA



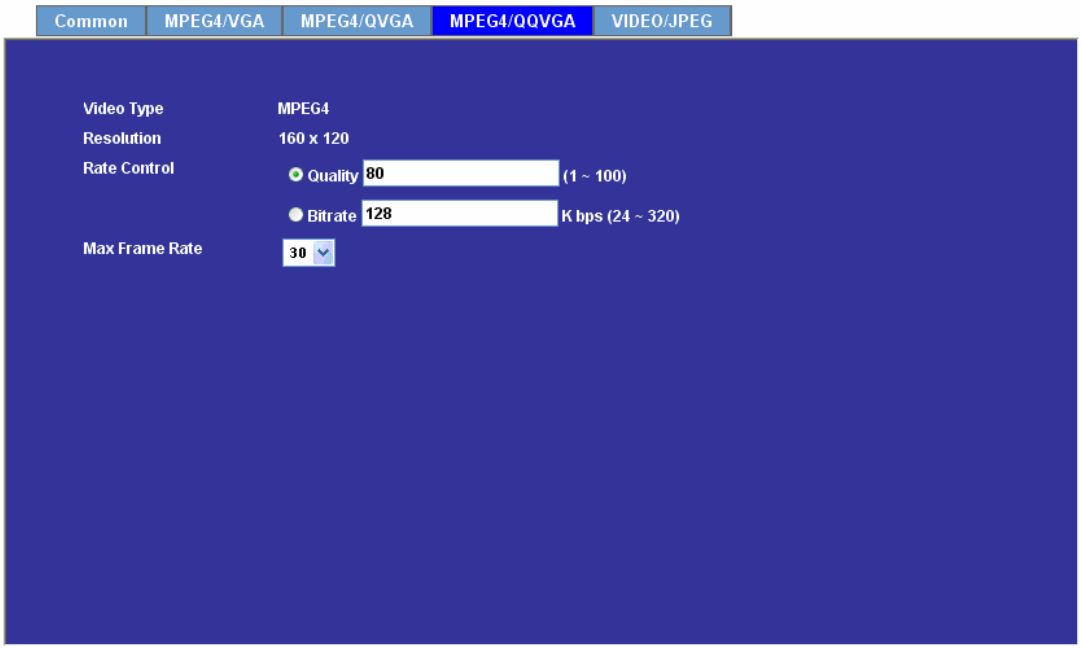
Video Type	It's MPEG4 mode in this profile
Resolution	It's VGA mode (640x480) in this profile
Bit rate Control	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 384kbps and 4096kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

3.8.3 MPEG4/QVGA



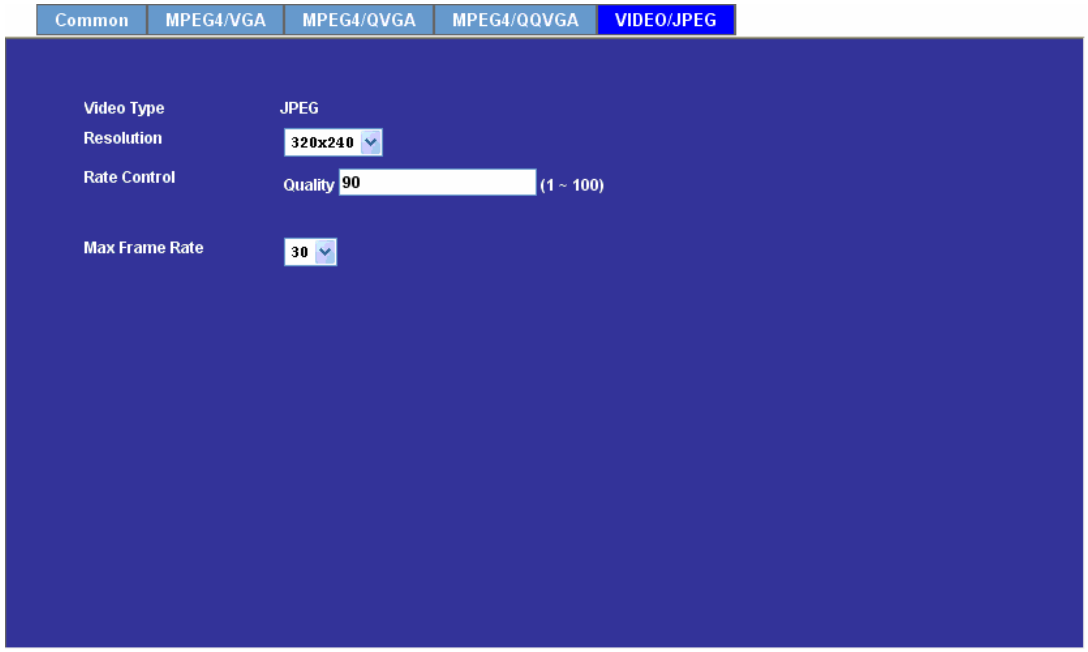
Video Type	It's MPEG4 mode in this profile.
Resolution	It's QVGA mode (320x240) in this profile.
Bit rate Control	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 128kbps and 1024kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth

3.8.4 MPEG4/QQVGA



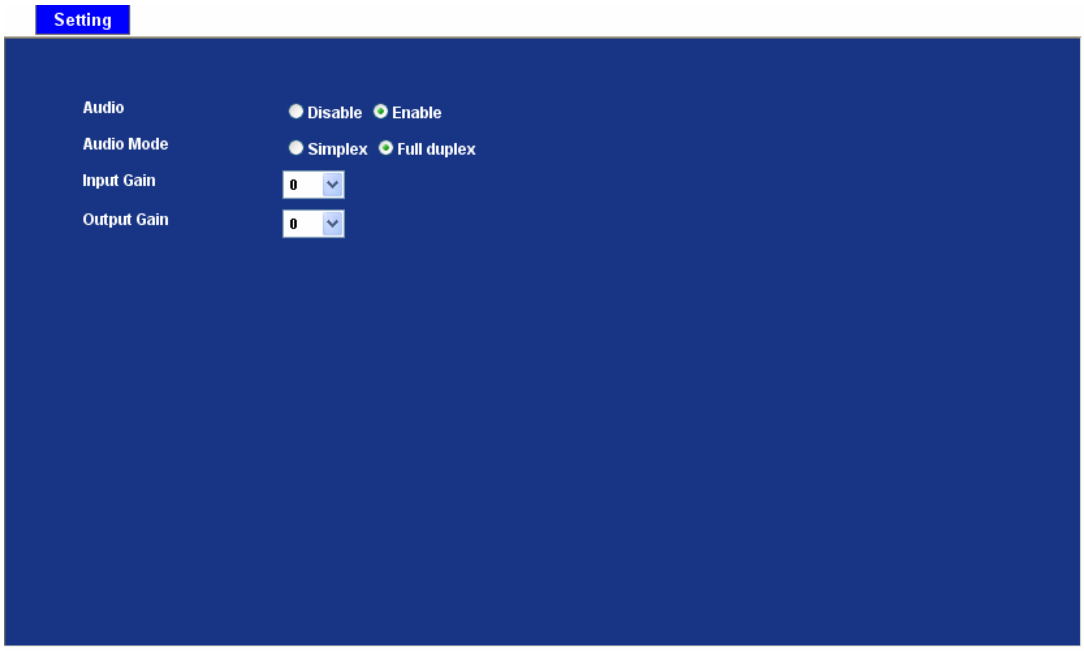
Video Type	It's MPEG4 mode in this profile.
Resolution	It's QQVGA mode (160x120) in this profile.
Bit rate Control	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 24kbps and 320kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

3.8.5 VIDEO/JPEG



Video Type	It's JPEG mode in this profile.
Resolution	User can select VGA, QVGA, or QQVGA mode as the resolution of this JPEG profile.
Rate Control	The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

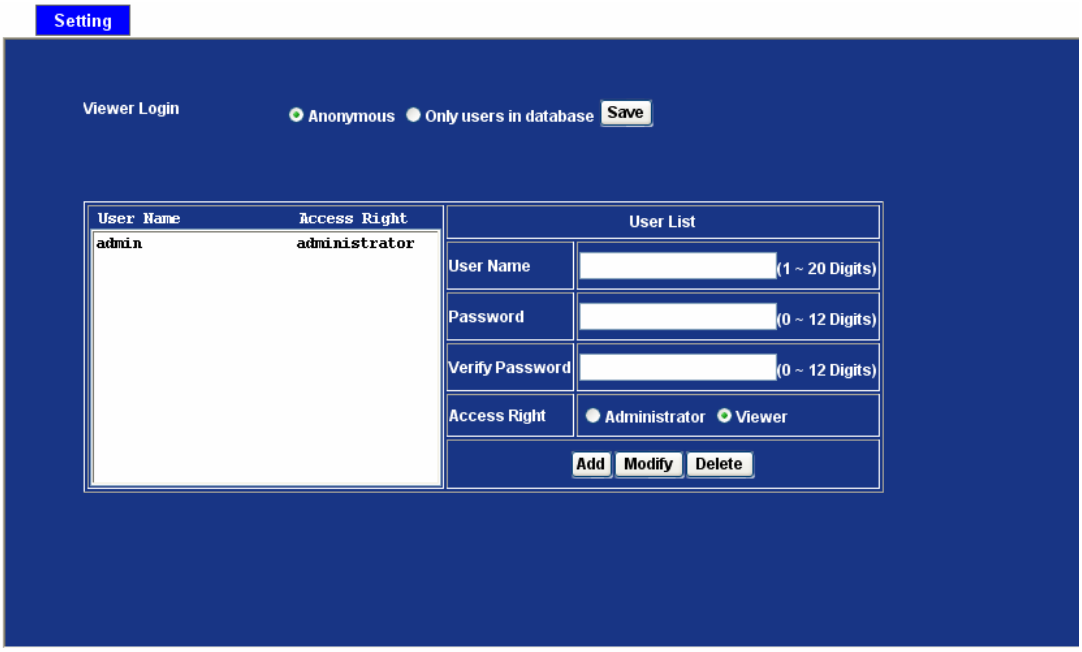
3.9 Audio



Audio	To enable or disable audio function
Audio Mode	To select Simplex or Full duplex (2-way audio) mode
Input Gain	To adjust gain of input audio
Output Gain	To adjust gain of output audio

3.10 User

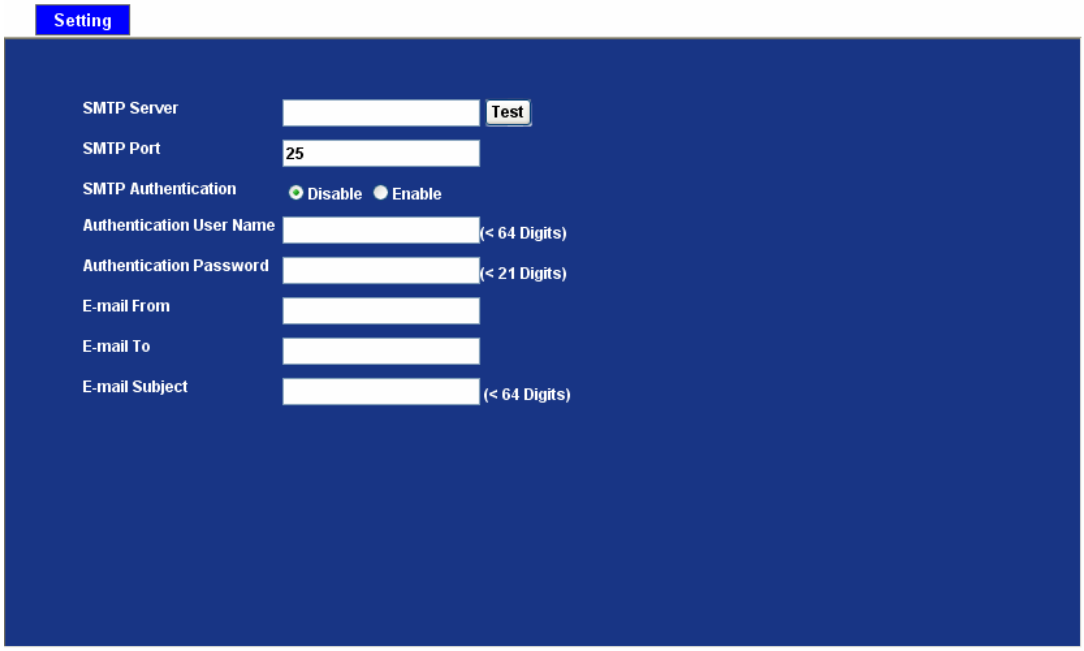
Use this menu to set the user names and password of the Administrator and up to 10 users, and access right of each user.



Viewer Login	**Anonymous**	Choose this to enable anonymous user login.
	Only users in database	Choose this to disable anonymous user login.
User Name	Enter the user's new account here which you want.	
Password	Enter the user's new password here.	
Verify Password	Please enter the user's new password here again to confirm.	
Access Right	Administrator can access every function in this device. However, Viewers only can view the video and access limited function.	
Add, Update, and Remove	Manage the user's account of viewer user.	

3.11 E-Mail

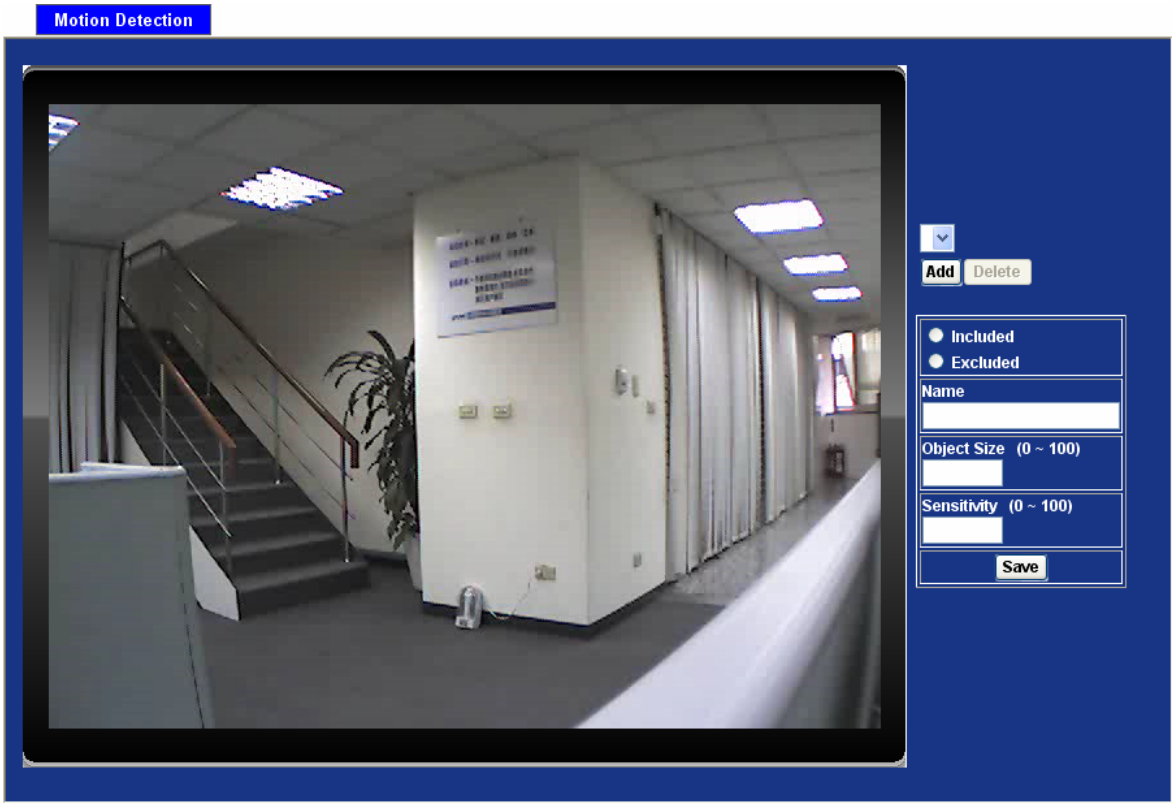
You may setup SMTP mail parameters for further operation of Event Schedule. That's, if users want to send the alarm message out, it will need to configure parameters here and also add at least one event schedule to enable event triggering.



SMTP Server	Type the SMTP server name or the IP address of the SMTP server.
Test	Send a test mail to mail server to check this account is available or not.
SMTP Port	Set port number of SMTP service.
SMTP Authentication	Select the authentication required when you send an e-mail.
Disable	If no authentication is required when an e-mail is sent.
Enable	If authentication is required when an e-mail is sent.
Authentication User Name	Type the user name for the SMTP server if Authentication is Enable.
Authentication Password	Type the password for the SMTP server if Authentication is Enable.
E-mail To	Type the receiver's e-mail address.
E-mail From	Type the sender's E-mail address. This address is used for reply e-mails.
E-mail Subject	Type the subject/title of the e-mail.

3.12 Object Detection

Use this menu to specify motion detection window 1 to window 4 and set the conditions for detection while observing a captured image.



Add and Del	To add or delete the motion windows. User can specify up to 4 Included and/or Excluded windows to monitor the video captured by this device. By dragging mouse on the image, you can change the position and size of the selected motion window accordingly.
Included or Excluded Window	These windows can be specified as Included or Excluded type.
Included	Windows target specific areas within the whole video image
Excluded	Windows define areas within an Include window that should be ignored (areas outside Include windows are automatically ignored)
Name	Name of the specified motion window.
Object Size	Defines the object size of motion detection. The higher object size will only larger objects trigger motion detection. The lower object size will even small objects trigger motion detection too. Generally speaking, the smaller size will be

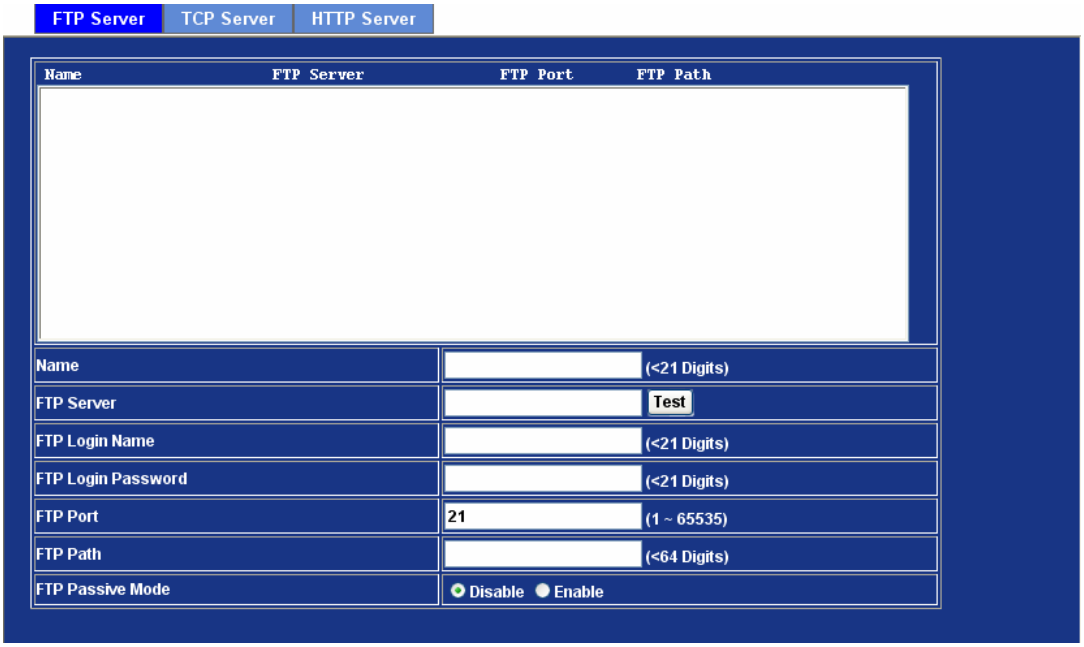
	easier to trigger event.
Sensitivity	Defines the sensitivity value of motion detection. The higher value will be more sensitivity.

3.13 Event Server

Setup FTP/TCP/HTTP server configuration

3.13.1 FTP Server

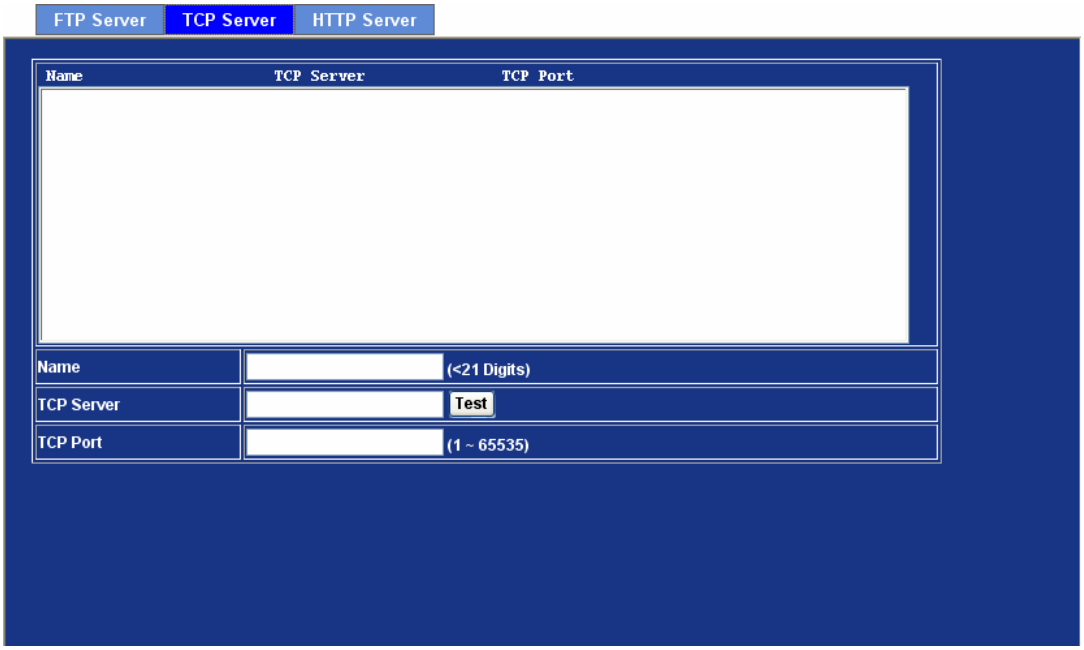
You may setup FTP parameters for further operation of Event Schedule. That's, if users want to send the alarm message to an FTP server, it will need to configure parameters here and also add at least one event schedule to enable event triggering as SMTP.



Name	User can specify multiple FTP paths as wish. Therefore, user needs to specify a name for each FTP setting.
FTP Server	Type the server name or the IP address of the FTP server.
Test	Check the FTP server whether this account is available or not.
FTP Login Name	Type the user name for the FTP server.
FTP Login Password	Type the password for the FTP server.
FTP Port	Set port number of FTP service.
FTP Path	Set working directory path of FTP server.
FTP Passive Mode	Select passive or active mode connecting to FTP server.

3.13.2 TCP Server

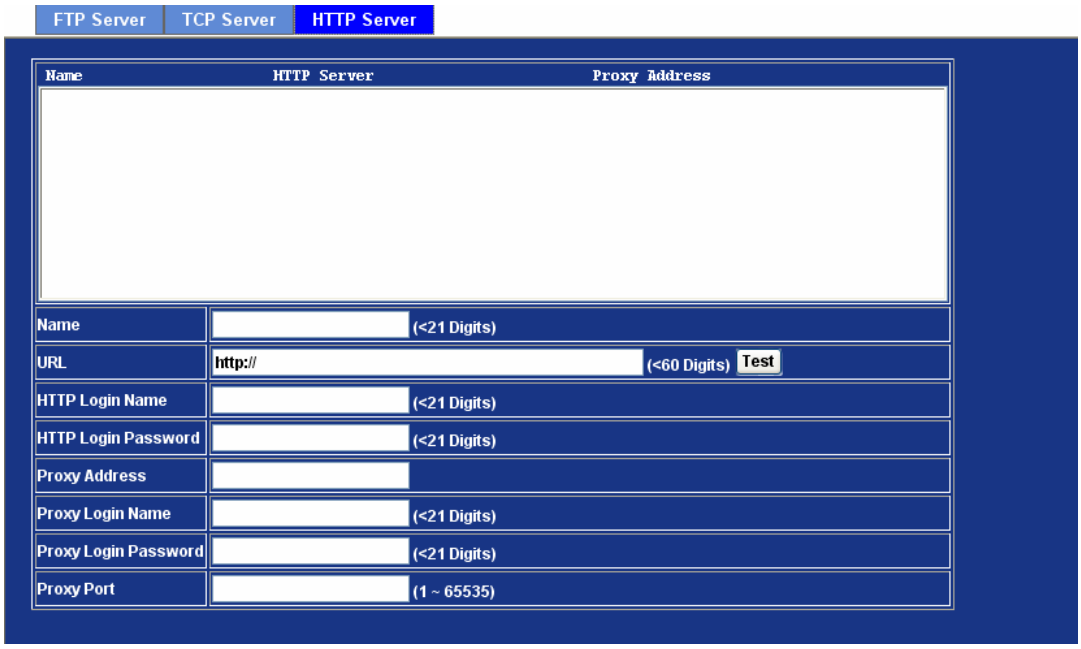
In addition to send video file to FTP server, the device also can send event message to specified TCP server.



Name	User can specify multiple TCP servers as wish. Therefore, user needs to specify a name for each TCP server setting.
TCP Server	Type the server name or the IP address of the TCP server.
TCP Port	Set port number of TCP server.

3.13.3 HTTP Server

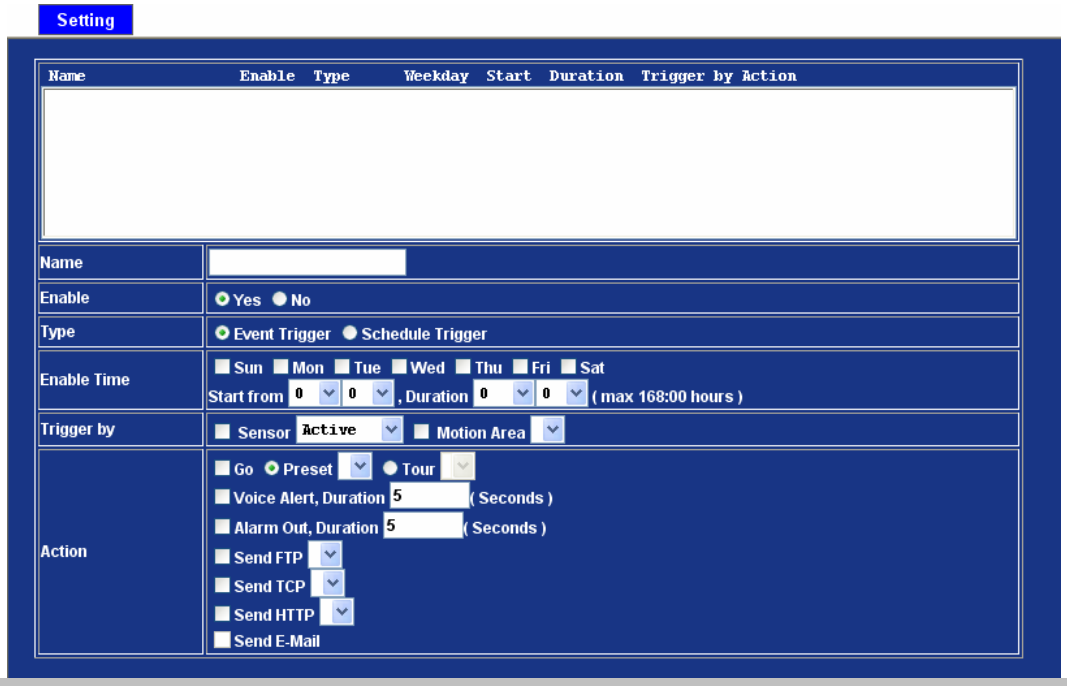
The device also can send event message to specified HTTP server.



Name	User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.
URL	Type the server name or the IP address of the HTTP server.
Test	Check the HTTP server whether it is available or not.
HTTP Login Name	Type the user name for the HTTP server.
HTTP Login Password	Type the password for the HTTP server.
Proxy Address	Type the server name or the IP address of the HTTP Proxy.
Proxy Login Name	Type the user name for the HTTP Proxy.
Proxy Login Password	Type the password for the HTTP Proxy.
Proxy Port	Set port number of Proxy.

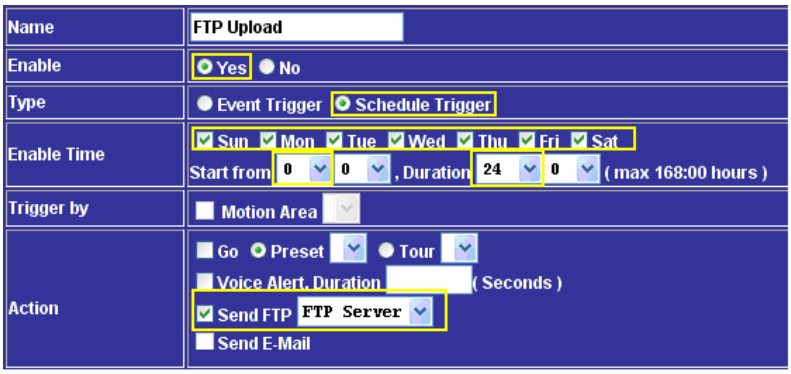
3.14 Event Schedule

This menu is used to specify the schedule of Events and activate the some actions provided by this device.



Name	Name of the Event or Schedule.
Enable	Enable or disable this Event or Schedule.
Type	Schedule start with Event trigger or Schedule trigger.
Enable Time	Define the feasible time slot.
Trigger by	Select the triggered sources with event trigger.
Action	Define the actions once event triggered.

Example. If you want to upload image from ICA-530 to FTP server periodically. You will need to configure some parameters as below:



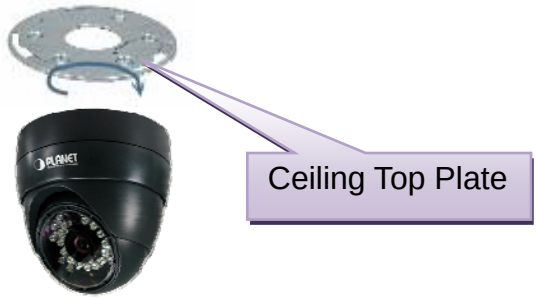
NOTE: ICA-530 will send a 15sec recording file to FTP server every min.

Appendix A: Reset Factory Default Settings

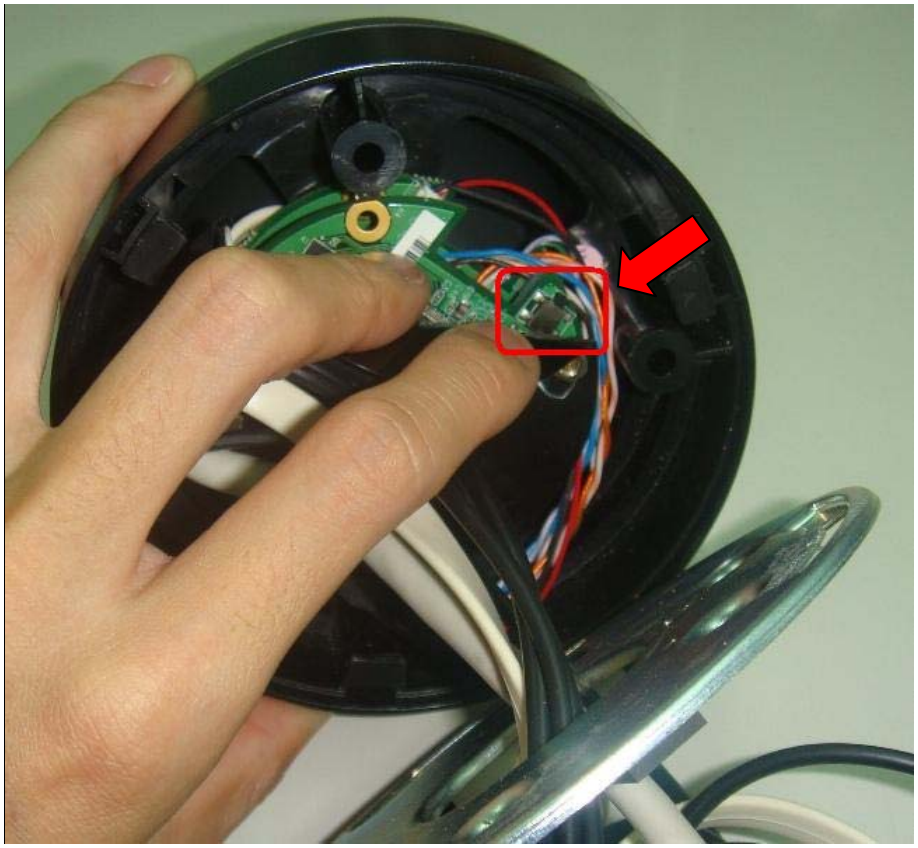
This button is used to restore the factory default settings. Sometimes restarting the ICA-530 will make the system back to a normal state. If the system still got problem after reset, user can restore the factory default settings and install it again.

Restore the ICA-530:

1. Rotate the ceiling top plate to leave from ICA-530.



2. Press and hold the button down continuously.



3. Wait at least 10 seconds and release the button. Then the ICA-530 has been restored to factory default settings and reboot again.

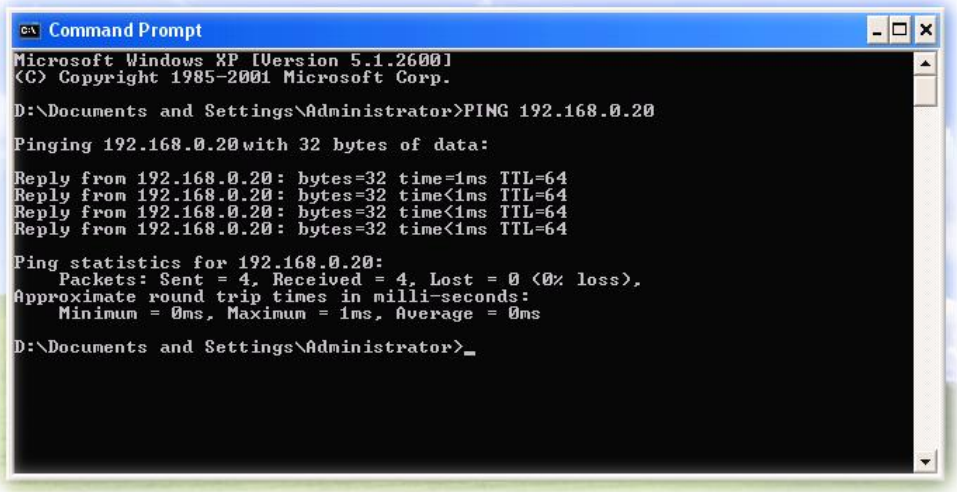
Appendix B: PING IP Address

The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm ICA-530 installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of ICA-530, utilize the PING command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the ICA-530.

The replies, as illustrated below, will provide an explanation to the problem.



If you want to detect any other devices conflicts with the IP address of ICA-530, also can utilize the PING command but you must disconnect the ICA-530 from the network first.

Appendix C: Bandwidth and Video Size Estimation

The frame rate of video transmitted from the ICA-530 depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your ICA-530.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the ICA-530 may be varying.

Image Resolution	Average range of Data Sizes for JPEG mode	Average bit rate for MPEG4 mode
160 x 120 (QQVGA)	3 ~ 6k byte per frame	64kbps~384kbps @ 30fps
320 x 240 (QVGA)	8 ~ 20k byte per frame	128kbps~768kbps @ 30fps
640 x 480 (VGA)	20 ~ 50K byte per frame	256kbps~4096kbps @ 30fps

Note: Audio streaming also takes bandwidth around 5 kbps to 64kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

MJPEG

Resolution	Quality setting	fps setting	Current stream	Current fps
320*240 CIF	Best	5 fps	around 2300Kbps	5 fps
320*240 CIF	Best	15 fps	around 6700Kbps	14.7fps
320*240 CIF	Best	25 fps	around 14300Kbps	28 fps
320*240 CIF	Normal	5 fps	around 400Kbps	4.2 fps
320*240 CIF	Normal	15 fps	around 1200Kbps	13 fps - 14 fps
320*240 CIF	Normal	25 fps	around 1700Kbps	30fps
320*240 CIF	Lowest	5 fps	around 350Kbps	4.2 fps
320*240 CIF	Lowest	15 fps	around 1100Kbps	13 - 14fps
320*240 CIF	Lowest	25 fps	around 2000Kbps	25 fps

MPEG4

Resolution	Stream setting	fps setting	Current stream	Current fps
640*480 VGA	384Kbps	5 fps	373Kbps - 388Kbps	5 fps
640*480 VGA	1024Kbps	5 fps	1024Kbps - 1036Kbps	5 fps
640*480 VGA	2048Kbps	5 fps	around 1800Kbps	5 fps
640*480 VGA	384Kbps	20 fps	around 550Kbps	22 fps
640*480 VGA	1024Kbps	20 fps	around 1400Kbps	20 fps
640*480 VGA	2048Kbps	20 fps	around 2600Kbps	16 - 17fps
320*240 CIF	200Kbps	5 fps	183Kbps - 200Kbps	5 fps
320*240 CIF	1024Kbps	5 fps	760Kbps - 800Kbps	5 fps
320*240 CIF	2048Kbps	5 fps	around 850Kbps	5 fps
320*240 CIF	200Kbps	25 fps	around 240Kbps	28 fps
320*240 CIF	1024Kbps	25 fps	around 1100Kbps	30 fps
320*240 CIF	2048Kbps	25 fps	around 1600Kbps	30 fps
160*120 QCIF	128Kbps	5 fps	117Kbps - 121Kbps	5 fps
160*120 QCIF	1024Kbps	5 fps	around 176Kbps	5 fps
160*120 QCIF	2048Kbps	5 fps	around 220Kbps	5 fps
160*120 QCIF	128Kbps	25 fps	around 155Kbps	30 fps
160*120 QCIF	1024Kbps	25 fps	around 520Kbps	30 fps
160*120 QCIF	2048Kbps	25 fps	around 1000Kbps	30 fps

Appendix D: DDNS Application

1. Preface

If you have a Cable modem or xDSL, this is a great way to host your own Networked Device or other TCP/IP Service. Get your own domain like www.yourname.com, www.yourname.com.tw etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). Your domain name's dynamic IP address is automatically tracked by a DDNS server.

Host your own Networked Device and much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS service is only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our Networked Device on.

(1) Environment of Fixed Valid IP Network

If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

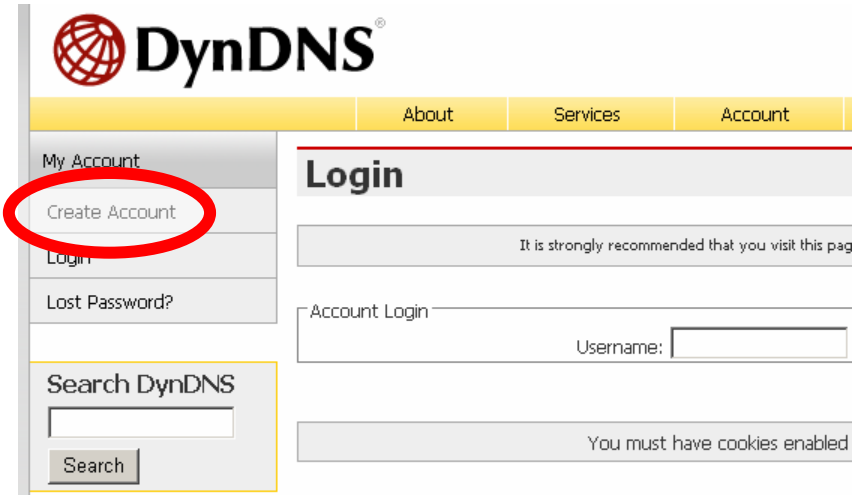
If users is under an environment of dynamic IP network (Dial-up xDSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of the Networked Device in order to let the outside administrator be able to access through internet.

3. Application Steps – DDNS & Domain Name

(1). Visit the following web site: http://www.dyndns.org/

(2). Click "Account"

(3). After the columns show up at the left side, click "Create Account".



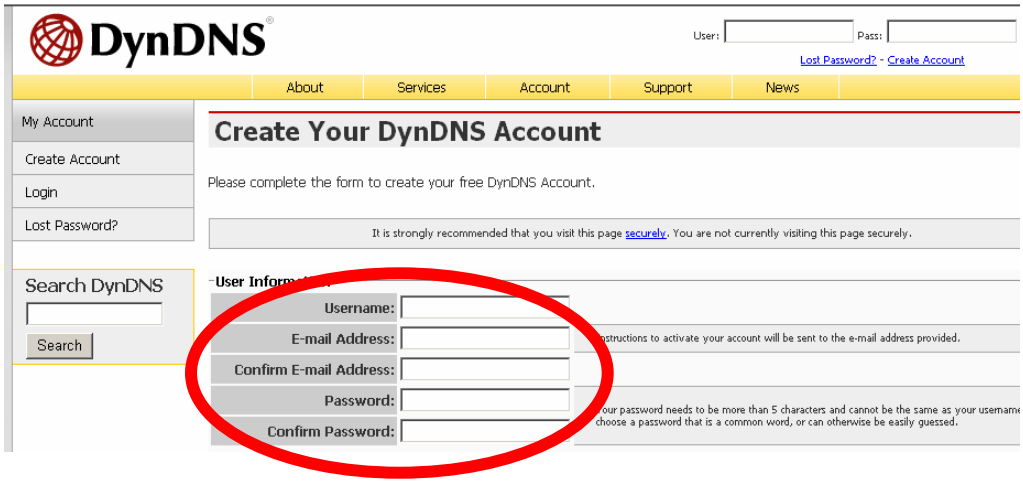
(4). Fill the application agreement and necessary information.

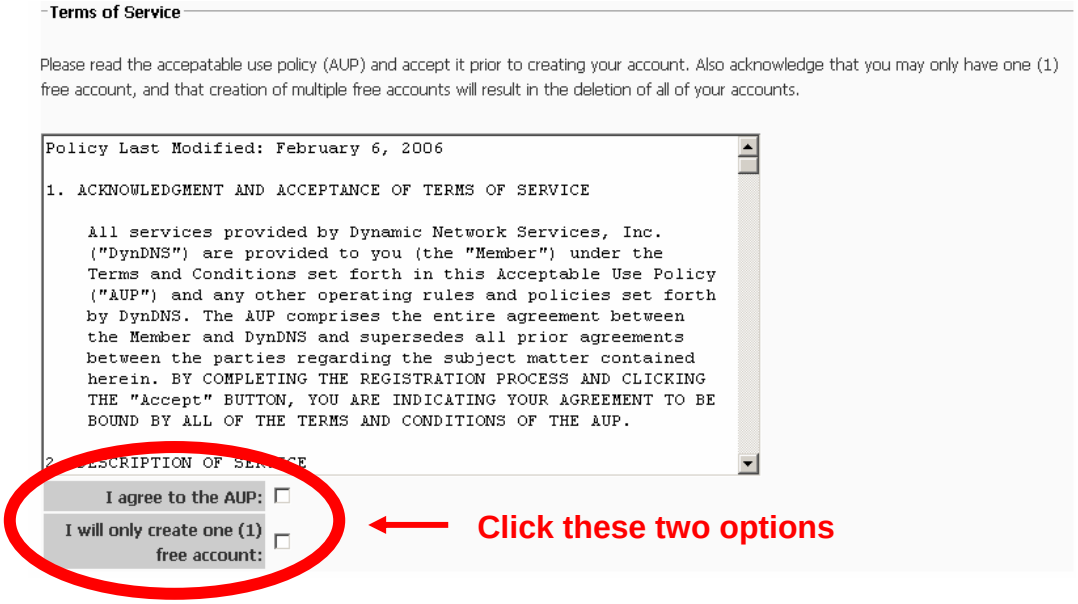
a. Username

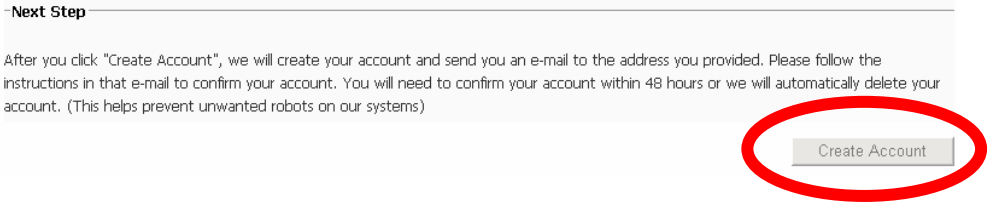
b. E-mail address and confirmation

c. Password and confirmation

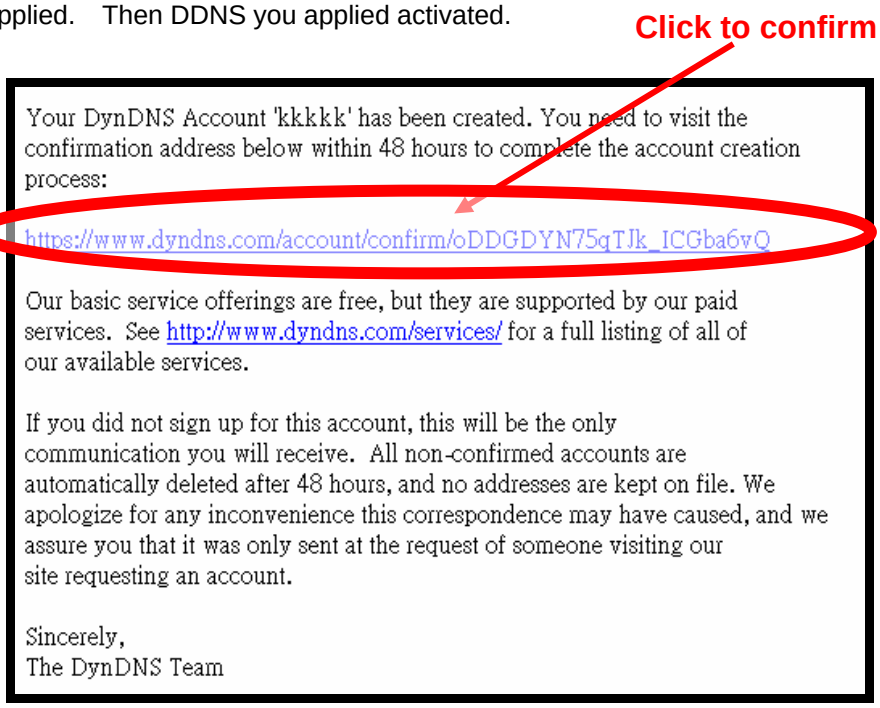
d. Submit all the input information and finish creating an account

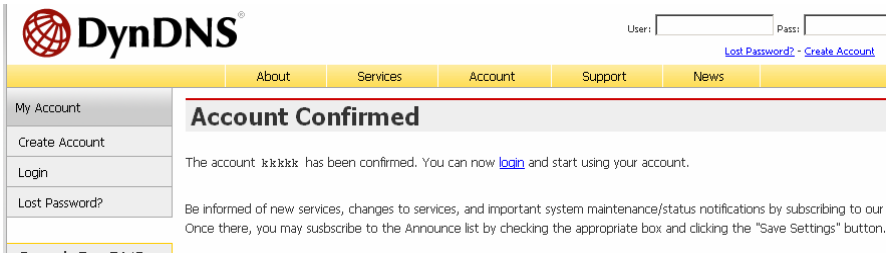






(5). Check your e-mail mailbox. There will be an e-mail with a title “Your DynDNS Account Information“. Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.

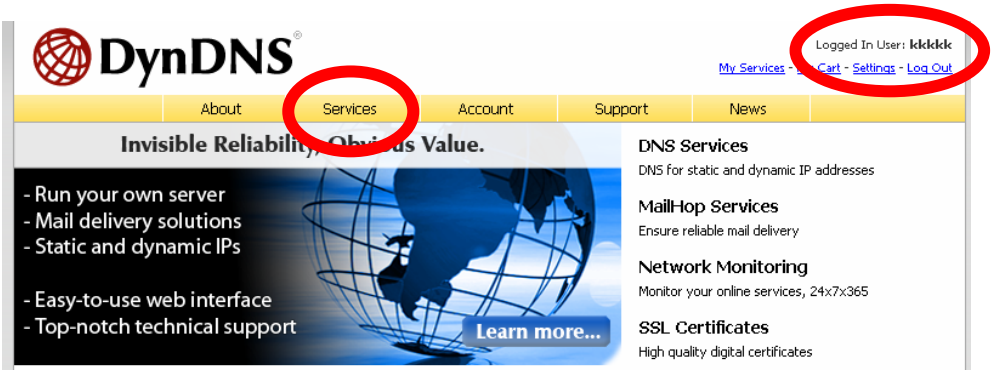




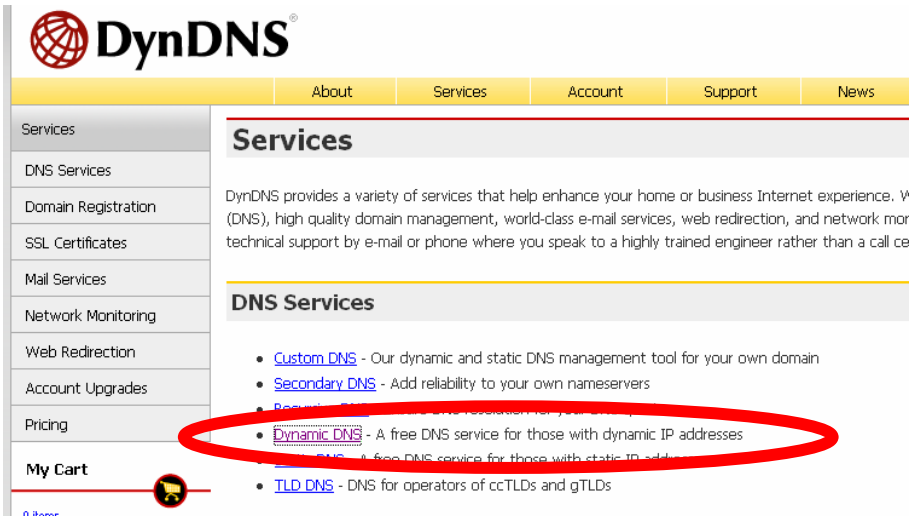
(6). Enter the web page http://www.dyndns.org/ again. Input your username and password that you just applied to login administration interface of DDNS server.

(7). If the correct username and password are input, you can see the following picture at the top-right of the login page.

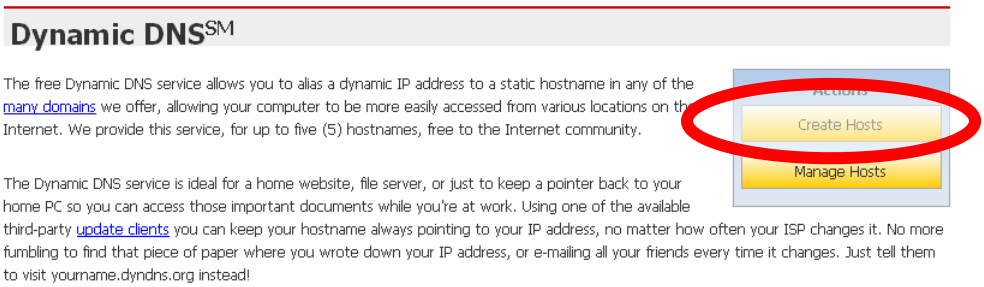
(8). Click the “Services”.



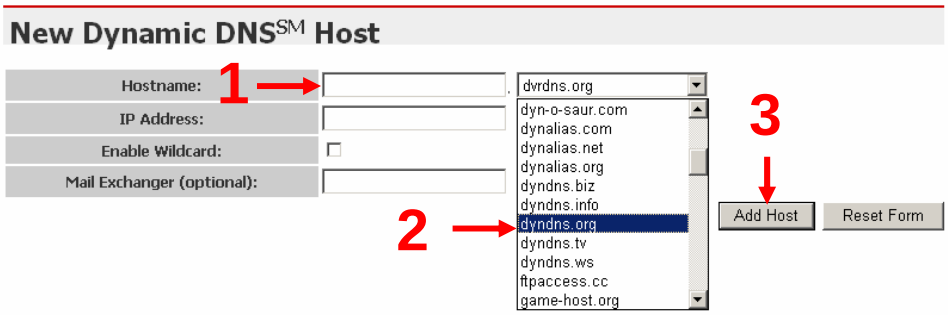
(9). Click the “ Dynamic DNS ”.



(10). Click the “Create Hosts”.



(11). We could create a domain name without any charge at this step. First, we input the host name. (No.1) Then we pick a domain that is easy to remember. Finally (No.2), click the “Add Host” to submit the domain name information. (No.3)



4. Setup the DDNS and PPPoE of Network Device

At last, users have to enter the web page of Networked Device and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE pages. After saving the modification, restart the device. The external users could browse the Networked Device by the input of their domain name.